

Relational Database Service

API Reference

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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](#).

If you plan to access RDS through an API, ensure that you are familiar with RDS concepts. For details, see [Service Overview](#) in *Relational Database Service User Guide*.

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](#).

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

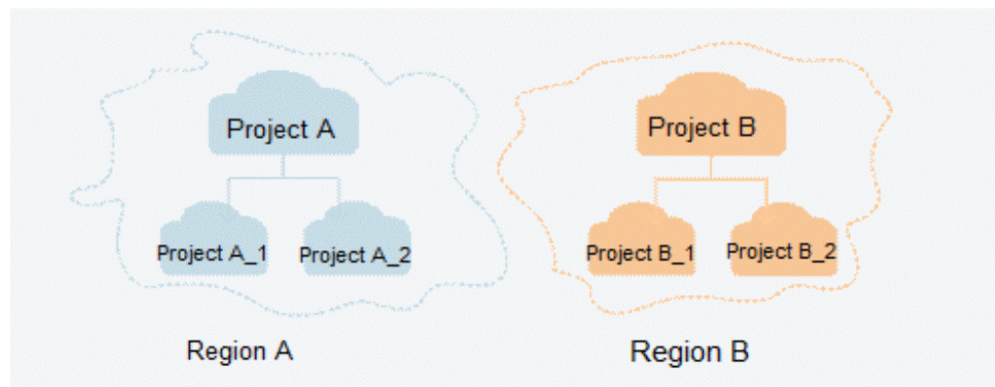
- The number of RDS DB instances that you can create is determined by your quota. To view or increase the quota, see [Managing Quotas](#).

- 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 support 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 purchase 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.

For more information about enterprise projects and how to obtain enterprise project IDs, see [Enterprise Management User Guide](#).

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)	Querying the Storage Type of a Database	Query the storage type of a specified DB engine version.
RDS APIs (v3)	Querying Storage Usage of a DB Instance	Query storage usage of a DB instance.
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.

Type	Subtype	Description
RDS APIs (v3)	DR Instances (RDS for PostgreSQL)	Configure DR capabilities for primary and DR instances, and promote DR instances to primary.
RDS APIs (v3)	Database Security	Improve database security, including configuring SSL encryption, changing database ports, modifying security groups, and changing floating IP addresses.
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)	Upgrading a Major Version	Query the target version to which a DB instance can be upgraded, perform an upgrade pre-check, and query the check status or upgrade status.
RDS APIs (v3)	Log Information Queries	Obtain log information, including querying database error logs and querying database slow logs.
RDS APIs (v3)	Instance Diagnosis	Obtain the number of instances after diagnosis and obtain the result of a specific diagnosis item.
RDS APIs (v3)	SQL Throttling (RDS for PostgreSQL)	Add a SQL throttling rule, delete a SQL throttling rule, and modify a SQL throttling rule.
RDS APIs (v3)	Database Proxy (RDS for MySQL)	Enable or disable the database proxy and query database proxy information.
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 (PostgreSQL)	Create and query databases, and create and query 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.

Type	Subtype	Description
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)	Extension Management (RDS for PostgreSQL)	Create an extension, query extensions, and update an extension.
RDS APIs (v3)	Configuring Replication Delay for a Read Replica (RDS for PostgreSQL)	Obtain the delayed replay status of WAL logs and pause or resume WAL replay.
RDS APIs (v3)	Recycling a DB Instance	Modify the recycling policy, query the recycling policy, and query instances in the recycle bin.
RDS APIs (v3)	Tag Management	Manage tags, including adding tags in batches, deleting tags in batches, and querying project tags.
RDS APIs (v3)	Quota Management	Query resource quotas.
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 . For example, the endpoint of IAM in the CN-Hong Kong region is iam.ap-southeast-1.myhuaweicloud.com .
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 .

Parameter	Description
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.

For example, to obtain an IAM token in the **CN-Hong Kong** region, obtain the endpoint of IAM (**iam.ap-southeast-1.myhuaweicloud.com**) for this region and the **resource-path** (**/v3/auth/tokens**) in the URI of the API used to **obtain a user token**. Then, construct the URI as follows:

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

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.

For example, in the case of the API used to **obtain a user token**, the request method is POST. The request is as follows:

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

Request Header

You can also add additional fields to a request, such as the fields required by a specified URI or an HTTP method. For example, 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 This parameter is mandatory for requests that use AK/SK authentication in the Dedicated Cloud (DeC) scenario or multi-project scenario.	e9993fc787d94b6c886cb aa340f9c0f4

Name	Description	Mandatory	Example
X-Auth-Token	Specifies the user token. 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. After the request is processed, the value of X-Subject-Token in the message header is the token value.	No This parameter is mandatory for token authentication.	The following is part of an example token: MIIPAgYJKoZIhvcNAQc-Co...ggg1BBIINPXsidG9rZ
X-Language	Specifies the request language type. The default value is en-us . Range - en-us - zh-cn	No	en-us

NOTE

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

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

The API used to **obtain a user token** does not require authentication. Therefore, 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://iam.ap-southeast-1.myhuaweicloud.com/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, such as ap-southeast-1) 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://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json

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

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

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

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

Token-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 an API to obtain a user token](#), you must set **auth.scope** in the request body to **project**.

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

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

AK/SK-based Authentication

NOTE

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

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

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

In AK/SK-based authentication, you can use an AK/SK to sign requests based on the signature algorithm or use the signing SDK to sign requests. For details about how to sign requests or use the signing SDK, see [API Request Signing Guide](#).

NOTICE

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

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 → MIIYXQYJKoZIhvcNAQcCoIIYJCCEoCAQExDTALBglghkgBZQMEAgEwgharBgkqhkiG9w0BBwGgghacBIIWmHsidG9rZW4iOnsiZXhwaXJlc19hdCI6IjwMTktMDItMTNUMC.
fj3KJs6YgKnpVNRbW2eZ5eb78SZOkjACgklQ01wi4JlGzrpd18LGXK5tdfdq4lqHCYb8P4NaY0NYejcAgzIVeFYtLWT1GSO0zxKZmlQHJQ82HBqHdglZO9fuEbl5dMhdavj+33wEI
xHRCE9I87o+k9-
j+CMZSEB7bUGd5Uj6eRASXl1jipPEGA270g1FruooL6jqglFkNPQuFSOU8+uSsttVwRtNfsC+qTp22Rkd5MCqFGQ8LcuUxC3a+9CMBnOintWW7oeRUVhVpxk8pxiX1wTEboX-
RzT6MUbpvGw-oPNFYxJECKnoH3HRozvOvN--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 this API, learn how to [authenticate](#) it.
- 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	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
config_id	Yes	Definition Parameter template ID. Constraints N/A Range You can obtain the value of this parameter from the id field in Table 5-562 . Default Value N/A

Request

Table 4-2 Parameters

Parameter	Mandatory	Type	Description
instance_ids	Yes	Array of strings	Definition Instance IDs. Constraints N/A

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	Definition Parameter template ID. Range N/A
configuration_name	String	Definition Parameter template name. Range N/A
success	Boolean	Definition Whether the parameter template is applied to all requested DB instances successfully. Range • 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	Definition Task flow ID. 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 this API, learn how to [authenticate](#) it.
- 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 values must be within the default ranges for specified DB engine versions. For details, see [Modifying Parameters of an RDS for MySQL Instance](#) in *Relational Database Service User Guide*.
- Modifying sensitive parameters, for example, **lower_case_table_names**, is risky. For details, see "[Suggestions on RDS for MySQL Parameter Tuning](#)" in *Relational Database Service User Guide*.

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	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID. Constraints N/A Range N/A Default Value N/A
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>	Definition Parameter values defined by users based on the default parameter template. Constraints N/A Range • 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 empty, the parameter value cannot be empty, either. Default Value N/A

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  | <b>Definition</b><br>Job ID.<br><b>Range</b><br>N/A                                                                                                                                                       |
| restart_required | Boolean | <b>Definition</b><br>Whether a reboot is required.<br><b>Range</b> <ul style="list-style-type: none"><li>• <b>true</b>: A reboot is required.</li><li>• <b>false</b>: A reboot is not required.</li></ul> |

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

## Constraints

- RDS for SQL Server supports batch calling of this API to restore one database to an existing DB instance.
- 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 version constraints of RDS for SQL Server, see [Table 4-7](#).
  - The total storage space of the target DB instance must be at least equal to that of the original DB instance for RDS for MySQL.
  - 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.
- When data is restored to an original DB instance:  
This API is supported only for MySQL and Microsoft SQL Server DB engines.

**Table 4-7** Restoring to the DB engine versions supported by RDS for SQL Server

| Original DB Engine Version | Restore To                                                                                                                                                                                                                                                                                   |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2008 R2 Standard Edition   | 2008 R2 Standard Edition<br>2008 R2 Enterprise Edition<br>2012 Standard Edition<br>2012 Enterprise Edition<br>2014 Standard Edition<br>2014 Enterprise Edition<br>2016 Standard Edition<br>2016 Enterprise Edition<br>2017 Standard Edition<br>2017 Enterprise Edition                       |
| 2012 Web Edition           | 2012 Web Edition<br>2012 Standard Edition<br>2012 Enterprise Edition<br>2014 Web Edition<br>2014 Standard Edition<br>2014 Enterprise Edition<br>2016 Web Edition<br>2016 Standard Edition<br>2016 Enterprise Edition<br>2017 Web Edition<br>2017 Standard Edition<br>2017 Enterprise Edition |
| 2012 Standard Edition      | 2012 Standard Edition<br>2012 Enterprise Edition<br>2014 Standard Edition<br>2014 Enterprise Edition<br>2016 Standard Edition<br>2016 Enterprise Edition<br>2017 Standard Edition<br>2017 Enterprise Edition                                                                                 |
| 2012 Enterprise Edition    | 2012 Enterprise Edition<br>2014 Enterprise Edition<br>2016 Enterprise Edition<br>2017 Enterprise Edition                                                                                                                                                                                     |



| Original DB Engine Version | Restore To                                                                                                                                               |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2014 Standard Edition      | 2014 Standard Edition<br>2014 Enterprise Edition<br>2016 Standard Edition<br>2016 Enterprise Edition<br>2017 Standard Edition<br>2017 Enterprise Edition |
| 2014 Enterprise Edition    | 2014 Enterprise Edition<br>2016 Enterprise Edition<br>2017 Enterprise Edition                                                                            |
| 2016 Standard Edition      | 2016 Standard Edition<br>2016 Enterprise Edition<br>2017 Standard Edition<br>2017 Enterprise Edition                                                     |
| 2016 Enterprise Edition    | 2016 Enterprise Edition<br>2017 Enterprise Edition                                                                                                       |
| 2017 Web Edition           | 2017 Web Edition<br>2017 Standard Edition<br>2017 Enterprise Edition                                                                                     |
| 2017 Standard Edition      | 2017 Standard Edition<br>2017 Enterprise Edition                                                                                                         |
| 2017 Enterprise Edition    | 2017 Enterprise Edition                                                                                                                                  |

## URI

- URI format  
POST /v3.1/{project\_id}/instances/recovery
- Parameter description

**Table 4-8** Parameters

| Parameter  | Mandatory | Description                                                                                                                                                                                                      |
|------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | <b>Definition</b><br>Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

## Request

**Table 4-9** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                       |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| source    | Yes       | Object | <b>Definition</b><br>Restoration information.<br>For details, see <a href="#">Table 4-10</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                        |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| target    | Yes       | Object | <b>Definition</b><br>Instance to which the backup is restored.<br>For details, see <a href="#">Table 4-11</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

**Table 4-10** source field data structure description

| Parameter   | Mandatory | Type   | Description                                                                                                          |
|-------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------|
| instance_id | Yes       | String | <b>Definition</b><br>Instance ID.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

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

| Parameter    | Mandatory | Type    | Description                                                                                                                                                                                                                                   |
|--------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| restore_time | No        | Integer | <p><b>Definition</b><br/>Time point of data restoration in the UNIX timestamp format. The unit is millisecond and the time zone is UTC.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p> |

| Parameter     | Mandatory | Type                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------|-----------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database_name | No        | Map<String, String> | <p><b>Definition</b></p> <p>Name of the new database after the restoration. If this parameter is available, you can restore specific databases and rename new databases.</p> <p><b>Constraints</b></p> <ul style="list-style-type: none"> <li>• This parameter is only available to RDS for SQL Server.</li> <li>• If this parameter is not specified, all databases are restored by default.</li> <li>• Before the restoration, make sure that the size of the restored data does not exceed the purchased disk capacity. Expand disk capacity, if necessary.</li> </ul> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• You can enter multiple new database names and separate them with commas (,). The new database names can contain the original database names.</li> </ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"> <li>• New database names must be different from the original database names. If they are left blank, the original database names will be used for restoration by default.</li> <li>• Check whether new database names are case sensitive based on the character set selected during instance creation and make sure each new database name is unique.</li> <li>• The total number of new and existing databases on the existing or original DB instances where data is restored cannot exceed the database quota specified by <b>rds_databases_quota</b>.</li> <li>• New database names cannot contain the following fields (case-insensitive): rdsadmin, master, msdb,</li> </ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p>tempdb, model, and resource.</p> <ul style="list-style-type: none"> <li>New database names must consist of 1 to 64 characters, including only letters, digits, underscores (_), and hyphens (-). If you want to restore data to multiple new databases, separate them with commas (,).</li> <li>New database names must be different from any database names on the original DB instance.</li> <li>New database names must be different from any database names on the existing or original DB instances where data is restored.</li> </ul> <p>Example:</p> <pre>"database_name": {"Original database name": "New database name"}</pre> <p>Correct example:</p> <pre>"database_name": {"A": "A,A1,A2", "B": "B1,B2", "C": ""}</pre> <p>Wrong example:</p> <pre>"database_name": {"A": "A", "B": "B1,B2"}</pre> |



| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p>2","C":"B1,C1","D":"D1,d1"},</p> <p>Error causes are as follows:</p> <ul style="list-style-type: none"> <li>• The new database name (A) is the same as the original database name (A).</li> <li>• The new database name (B1) is not unique.</li> <li>• When the database name is case insensitive, the database names D1 and d1 conflict.</li> <li>• Exercise caution when restoring data to an existing or original DB instance.</li> </ul> <p><b>Default Value</b><br/>N/A</p> |

| Parameter             | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| restore_all_databases | No        | Boolean | <p><b>Definition</b><br/>Whether to restore all databases to the target instance.</p> <p><b>Constraints</b><br/>This field is available only for Microsoft SQL Server.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> All databases will be restored to the target instance.</li> <li>• <b>false:</b> Not all databases will be restored to the target instance.</li> </ul> <p><b>Default Value</b><br/>The default value is <b>false</b>.</p> |

**Table 4-11** target field data structure description

| Name        | Mandatory | Type   | Description                                                                                                                                                                                              |
|-------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_id | Yes       | String | <p><b>Definition</b><br/>Specifies the ID of the DB instance where the backup will be restored to.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>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 all databases to a DB instance from an RDS for SQL Server backup.

```
{
 "source": {
 "instance_id": "61879e6085bc44d1831b0ce62d988fd9in04",
 "type": "backup",
 "backup_id": "b021670e69ba4538b7b2ed07257306aembr04",
 "restore_all_database": true
 },
 "target": {
 "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin04"
 }
}
```

- Restore instance data to a specific point in time.

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

- Restore some databases of an RDS for SQL Server instance to a specific point in time.

```
{
 "source": {
 "instance_id": "61879e6085bc44d1831b0ce62d988fd9in04",
 "type": "timestamp",
 "restore_time": 1532001446987,
 "database_name": {
 "db1": "dbtest1,dbtest2",
 "db2": "db2,db02",
 "db3": ""
 }
 },
 "target": {
 "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin04"
 }
}
```

## Response

- Normal response

**Table 4-12** Parameters

| Parameter | Type   | Description                                                       |
|-----------|--------|-------------------------------------------------------------------|
| job_id    | String | <b>Definition</b><br>Indicates the job ID.<br><b>Range</b><br>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 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 a selected time point to a temporary DB instance, exports the tables to be restored, and then restores the tables to the original DB instance.

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

## Constraints

- This API is available to RDS for MySQL only.
- This operation will generate restored tables on the original DB instance. Ensure that the original DB instance has sufficient storage capacity.

## URI

- URI format

POST /v3.1/{project\_id}/instances/{instance\_id}/restore/tables

- Parameter description

**Table 4-13** Parameters

| Parameter   | Mandatory | Description                                                                                                                                                                                                      |
|-------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | <b>Definition</b><br>Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| instance_id | Yes       | <b>Definition</b><br>Instance ID.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                             |

## Request

**Table 4-14** Parameters

| Parameter    | Mandatory | Type | Description                                                                                                                                     |
|--------------|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| restore_time | Yes       | Long | <b>Definition</b><br>Restoration timestamp, in milliseconds.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

| Parameter       | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| restore_tables  | Yes       | Array of objects | <p><b>Definition</b></p> <p>Table information. For details, see <a href="#">Table 4-15</a>.</p> <p><b>Constraints</b></p> <p>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| is_fast_restore | No        | Boolean          | <p><b>Definition</b></p> <p>Whether to use fast restoration.</p> <p><b>Constraints</b></p> <ul style="list-style-type: none"> <li>To set this parameter, check whether fast restoration is supported by referring to <a href="#">Checking Whether Fast Restoration Can Be Used for Restoring Databases or Tables (RDS for MySQL)</a>. If fast restoration is supported, but there are XA transactions in the DB instance, set this parameter to <b>false</b> to prevent data loss.</li> <li>If this parameter is not specified, the system determines whether to use fast restoration based on the query result of <a href="#">Checking Whether Fast Restoration Can Be Used for Restoring Databases or Tables (RDS for MySQL)</a>. If fast restoration is supported, but there are XA transactions in the DB instance, set this parameter to <b>false</b>.</li> </ul> <p><b>Range</b></p> <ul style="list-style-type: none"> <li><b>true</b>: Fast restoration is used.</li> <li><b>false</b>: Fast restoration is not used.</li> </ul> <p><b>Default Value</b></p> <p>N/A</p> |

**Table 4-15** Data structure of the restore\_tables field

| Parameter | Mandatory | Type             | Description                                                                                                            |
|-----------|-----------|------------------|------------------------------------------------------------------------------------------------------------------------|
| database  | Yes       | String           | <b>Definition</b><br>Database name.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| tables    | Yes       | Array of objects | <b>Definition</b><br>Table information. For details, see <a href="#">Table 4-16</a> .<br><b>Constraints</b><br>N/A     |

**Table 4-16** Data structure of the tables field

| Parameter | Mandatory | Type   | Description                                                                                                                                         |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| old_name  | Yes       | String | <b>Definition</b><br>Original table name before the restoration.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| new_name  | Yes       | String | <b>Definition</b><br>Table name after the restoration.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A           |

## Example Request

Restore table data to a specific point in time.

```
POST https://{endpoint}/v3.1/054e292c9880d4992f02c0196d3ea468/instances/
d8e6ca5a624745bcb546a227aa3ae1cfin01/restore/tables

{
 "restore_time": 1689859468000,
 "restore_tables": [{
 "database": "database",
 "tables": [{
 "old_name": "oldTable",
 "new_name": "newTable"
 }]
 }]
}
```

## Response

- Normal response

**Table 4-17** Response body parameters

| Parameter | Type   | Description                                          |
|-----------|--------|------------------------------------------------------|
| job_id    | String | <b>Definition</b><br>Task ID.<br><b>Range</b><br>N/A |

- Example normal response

```
{
 "job_id": "04efe8e2-9255-44ae-a98b-d87cae411890"
}
```
- 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](#).



## 4.5 Querying Database Error Logs (MySQL)

### Function

This API is used to query the latest error logs of a DB instance. A maximum of 2,000 log records can be queried.

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

### Constraints

This API is supported for MySQL only.

### URI

- URI format  
GET /v3.1/{project\_id}/instances/{instance\_id}/errorlog?  
start\_date={start\_date}&end\_date={end\_date}
- Parameter description

**Table 4-18** Parameters

| Parameter   | Mandatory | Description                                                                                                                                                                                                      |
|-------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | <b>Definition</b><br>Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| instance_id | Yes       | <b>Definition</b><br>ID of the instance to be queried.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                        |

| Parameter  | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_date | Yes       | <p><b>Definition</b><br/>Start time.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value is in the "yyyy-mm-ddThh:mm:ssZ" format.<br/><b>T</b> is the separator between the calendar and the hourly notation of time. <b>Z</b> indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as <b>+0800</b>.</p> <p><b>Default Value</b><br/>N/A</p>                                                   |
| end_date   | Yes       | <p><b>Definition</b><br/>End time.</p> <p><b>Constraints</b><br/>You can only query error logs generated within a month.</p> <p><b>Range</b><br/>The value is in the "yyyy-mm-ddThh:mm:ssZ" format.<br/><b>T</b> is the separator between the calendar and the hourly notation of time. <b>Z</b> indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as <b>+0800</b>.</p> <p><b>Default Value</b><br/>N/A</p> |
| offset     | No        | <p><b>Definition</b><br/>Index offset. The query starts from the next piece of data indexed by this parameter.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value must be a non-negative number.</p> <p><b>Default Value</b><br/><b>0</b>: The query starts from the first data record.</p>                                                                                                                                                   |

| Parameter | Mandatory | Description                                                                                                                                                                                                                                                                           |
|-----------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit     | No        | <b>Definition</b><br>Number of records (query results) displayed on each page.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>1-100<br><b>Default Value</b><br>10                                                                                                                    |
| level     | No        | <b>Definition</b><br>Log level.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li>• ALL</li> <li>• INFO</li> <li>• LOG</li> <li>• WARNING</li> <li>• ERROR</li> <li>• FATAL</li> <li>• PANIC</li> <li>• NOTE</li> </ul> <b>Default Value</b><br>ALL |

## Request

- Request parameters  
None
- URI example  
GET https://{endpoint}/v3.1/0483b6b16e954cb88930a360d2c4e663/instances/cee5265e1e5845649e354841234567dfin01/errorlog?offset=1&limit=10&start\_date=2022-08-23T07:41:50+0800&end\_date=2022-08-24T07:41:50+0800&level=ALL

## Response

- Normal response

**Table 4-19** Parameters

| Parameter      | Type             | Description                                                                                 |
|----------------|------------------|---------------------------------------------------------------------------------------------|
| error_log_list | Array of objects | <b>Definition</b><br>Detailed information.<br>For details, see <a href="#">Table 4-20</a> . |
| total_record   | Integer          | <b>Definition</b><br>Total number of records.<br><b>Range</b><br>N/A                        |

**Table 4-20** error\_log\_list field data structure description

| Parameter | Type   | Description                                                         |
|-----------|--------|---------------------------------------------------------------------|
| time      | String | <b>Definition</b><br>Time in the UTC format.<br><b>Range</b><br>N/A |
| level     | String | <b>Definition</b><br>Log level.<br><b>Range</b><br>N/A              |
| content   | String | <b>Definition</b><br>Error log content.<br><b>Range</b><br>N/A      |

- Example normal response

```
{
 "error_log_list": [
 {
 "time": "2022-08-23T22:59:17Z",
 "level": "WARNING",
 "content": "Occur error when reading bytes from a network handler. Client actively closes the connection."
 },
 {
 "time": "2022-08-23T22:54:17Z",
 "level": "WARNING",
 "content": "Occur error when reading bytes from a network handler. Client actively closes the connection."
 }
],
 "total_record": 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](#).

# 4.6 Querying Database Slow Logs (RDS for MySQL)

## Function

This API is used to query the latest slow logs of a DB instance. A maximum of 2,000 log records can be queried.

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

## Constraints

This API is supported only for MySQL.

## URI

- URI format  
GET /v3.1/{project\_id}/instances/{instance\_id}/slowlog?  
start\_date={start\_date}&end\_date={end\_date}
- Parameter description

**Table 4-21** Parameters

| Parameter  | Mandatory | Description                                                                                                                                                                                                      |
|------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | <b>Definition</b><br>Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

| Parameter   | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_id | Yes       | <p><b>Definition</b><br/>ID of the instance to be queried.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p>                                                                                                                                                                                                                                                                                              |
| start_date  | Yes       | <p><b>Definition</b><br/>Start time.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value is in the "yyyy-mm-ddThh:mm:ssZ" format.<br/><b>T</b> is the separator between the calendar and the hourly notation of time. <b>Z</b> indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as <b>+0800</b>.</p> <p><b>Default Value</b><br/>N/A</p>                                                  |
| end_date    | Yes       | <p><b>Definition</b><br/>End time.</p> <p><b>Constraints</b><br/>You can only query slow logs generated within a month.</p> <p><b>Range</b><br/>The value is in the "yyyy-mm-ddThh:mm:ssZ" format.<br/><b>T</b> is the separator between the calendar and the hourly notation of time. <b>Z</b> indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as <b>+0800</b>.</p> <p><b>Default Value</b><br/>N/A</p> |

| Parameter | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset    | No        | <p><b>Definition</b><br/>Index offset. The query starts from the next piece of data indexed by this parameter.</p> <p><b>Constraints</b><br/>A maximum of 2,000 log records can be queried.</p> <p><b>Range</b><br/>The value must be a non-negative number. The value of <b>offset</b> plus the value of <b>limit</b> must be no more than 2000. For example, if the value of <b>offset</b> is set to <b>1900</b>, and the value of <b>limit</b> cannot be greater than <b>100</b>.</p> <p><b>Default Value</b><br/><b>0</b>: The query starts from the first data record.</p> |
| limit     | No        | <p><b>Definition</b><br/>Number of records (query results) displayed on each page.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>1-100</p> <p><b>Default Value</b><br/><b>10</b></p>                                                                                                                                                                                                                                                                                                                                                                                |
| type      | No        | <p><b>Definition</b><br/>SQL statement type.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>If it is left blank, all statement types are queried. Valid values:</p> <ul style="list-style-type: none"> <li>• INSERT</li> <li>• UPDATE</li> <li>• SELECT</li> <li>• DELETE</li> <li>• CREATE</li> </ul> <p><b>Default Value</b><br/>N/A</p>                                                                                                                                                                                                                           |

## Request

- Request parameters  
None

## Response

- Normal response

**Table 4-22** Parameters

| Parameter     | Type             | Description                                                                                 |
|---------------|------------------|---------------------------------------------------------------------------------------------|
| slow_log_list | Array of objects | <b>Definition</b><br>Detailed information.<br>For details, see <a href="#">Table 4-23</a> . |
| total_record  | Integer          | <b>Definition</b><br>Total number of records.<br><b>Range</b><br>N/A                        |

**Table 4-23** slow\_log\_list field data structure description

| Parameter | Type   | Description                                                       |
|-----------|--------|-------------------------------------------------------------------|
| count     | String | <b>Definition</b><br>Number of executions.<br><b>Range</b><br>N/A |
| time      | String | <b>Definition</b><br>Execution time.<br><b>Range</b><br>N/A       |
| lock_time | String | <b>Definition</b><br>Lock wait time.<br><b>Range</b><br>N/A       |
| rows_sent | String | <b>Definition</b><br>Number of sent rows.<br><b>Range</b><br>N/A  |



| Parameter     | Type   | Description                                                                                                                                                       |
|---------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rows_examined | String | <b>Definition</b><br>Number of scanned rows.<br><b>Range</b><br>N/A                                                                                               |
| database      | String | <b>Definition</b><br>Database which slow logs belong to.<br><b>Range</b><br>N/A                                                                                   |
| users         | String | <b>Definition</b><br>Account.<br><b>Range</b><br>N/A                                                                                                              |
| query_sample  | String | <b>Definition</b><br>Execution syntax. By default, slow query logs are anonymized. To display them in plaintext, contact customer service.<br><b>Range</b><br>N/A |
| type          | String | <b>Definition</b><br>Statement type.<br><b>Range</b><br>N/A                                                                                                       |
| start_time    | String | <b>Definition</b><br>Start time in the UTC format.<br><b>Range</b><br>N/A                                                                                         |
| client_ip     | String | <b>Definition</b><br>IP address.<br><b>Range</b><br>N/A                                                                                                           |

- Example normal response

```
{
 "total_record": 1,
 "slow_log_list": [
 {
 "count": "1",
 "time": "1.04899 s",
 "lock_time": "0.00003 s",
 "rows_sent": "0",
 "rows_examined": "0",
 "database": "mysql",

```

```
{
 "users": "root",
 "query_sample": "INSERT INTO time_zone_name (Name, Time_zone_id) VALUES (N,
@time_zone_id);",
 "type": "INSERT",
 "start_time": "2018-08-06T10:41:14",
 "client_ip": "192.*.*.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](#).

# 4.7 Deleting a Database (RDS for SQL Server)

## Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.

## URI

- URI format  
DELETE /v3.1/{project\_id}/instances/{instance\_id}/database/{db\_name}
- Parameter description

**Table 4-24** Parameters

| Parameter   | Mandatory | Description                                                                                                                                                                                                                             |
|-------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | <p><b>Definition</b><br/>Project ID of a tenant in a region.<br/>To obtain the value, see <a href="#">Obtaining a Project ID</a>.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p> |
| instance_id | Yes       | <p><b>Definition</b><br/>Instance ID.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p>                                                                                             |
| db_name     | Yes       | <p><b>Definition</b><br/>Name of the database to be deleted.</p>                                                                                                                                                                        |

## Request

**Table 4-25** Parameters

| Parameter       | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                            |
|-----------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_force_delete | No        | Boolean | <b>Definition</b><br>Whether to forcibly delete the database.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li><b>true:</b> The database is forcibly deleted.</li> <li><b>false:</b> The database is not forcibly deleted.</li> </ul> <b>Default Value</b><br>false |

## Example Request

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

## Response

- Normal response

**Table 4-26** Parameters

| Parameter | Type   | Description                                         |
|-----------|--------|-----------------------------------------------------|
| job_id    | String | <b>Definition</b><br>Job ID.<br><b>Range</b><br>N/A |

- 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](#).

# 4.8 Shrinking Database Logs

## Function

This API is used to shrink database logs of an RDS for SQL Server instance.

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

## URI

- URI format  
POST /v3.1/{project\_id}/instances/{instance\_id}/db-shrink
- Parameter description

**Table 4-27** Parameters

| Parameter  | Mandatory | Description                                                                                                                                                                                                      |
|------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | <b>Definition</b><br>Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

| Parameter   | Mandatory | Description                                                                                                          |
|-------------|-----------|----------------------------------------------------------------------------------------------------------------------|
| instance_id | Yes       | <b>Definition</b><br>Instance ID.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

## Request

**Table 4-28** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                            |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------|
| db_name   | Yes       | String | <b>Definition</b><br>Database name.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

## Example Request

Shrinking database logs

```
POST https://{endpoint}/v3.1/0483b6b16e954cb88930a360d2c4e663/instances/161e33e453954e21acff65bfa3dbfebin04/db-shrink
{
 "db_name": "test1"
}
```

## Response

- Normal response

**Table 4-29** Parameters

| Parameter | Type   | Description                                                                                                                                                                                                        |
|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| resp      | String | <b>Definition</b><br>Calling result.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>successful</b>: The API is successfully called.</li> <li>• <b>failed</b>: The API failed to be called.</li> </ul> |

- 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 API v3 (Recommended)

---

## 5.1 Querying Version Information About APIs

### 5.1.1 Querying API Versions

#### Function

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

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

#### URI

- URI format  
GET /
- Parameter description  
None

#### Request

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

#### Response

- Normal response



**Table 5-1** Parameters

| Parameter | Type             | Description                                                                                                    |
|-----------|------------------|----------------------------------------------------------------------------------------------------------------|
| versions  | Array of objects | <b>Definition</b><br>List of detailed API version information.<br>For details, see <a href="#">Table 5-2</a> . |

**Table 5-2** versions field data structure description

| Parameter | Type             | Description                                                                                                                                                                                                              |
|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String           | <b>Definition</b><br>API version.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>v1</b>: API v1 version</li> <li>• <b>v3</b>: API v3 version</li> </ul>                                                     |
| links     | Array of objects | <b>Definition</b><br>API links. The value is empty when the version is v1 or v3.<br>For details, see <a href="#">Table 5-3</a> .                                                                                         |
| status    | String           | <b>Definition</b><br>Version status.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>CURRENT</b>: recommended version</li> <li>• <b>DEPRECATED</b>: deprecated version which may be deleted later</li> </ul> |

| Parameter | Type   | Description                                                                                                                                                                                                                                   |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| updated   | String | <b>Definition</b><br>Version update time.<br><b>Range</b><br>The format is yyyy-mm-dd Thh:mm:ssZ.<br><b>T</b> is the separator between the calendar and the hourly notation of time. <b>Z</b> indicates the Coordinated Universal Time (UTC). |

**Table 5-3** links field data structure description

| Parameter | Type   | Description                                                                                                               |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------|
| href      | String | <b>Definition</b><br>URL of the API.<br><b>Range</b><br>The value is "".                                                  |
| rel       | String | <b>Definition</b><br>URL type.<br><b>Range</b><br>The value is <b>self</b> , indicating that <b>href</b> is a local link. |

- Example normal response

```
{
 "versions": [{
 "id": "v3",
 "links": [],
 "status": "CURRENT",
 "updated": "2019-01-15T12:00:00Z"
 },
 {
 "id": "v1",
 "links": [],
 "status": "DEPRECATED",
 "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 this API, learn how to [authenticate](#) it.
- 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       | <b>Definition</b><br>API version.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value is case-sensitive.<br>For details, see <b>id</b> in <a href="#">Table 5-2</a> in section <a href="#">Querying API Versions</a> .<br><b>Default Value</b><br>N/A |

### Request

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

## Response

- Normal response

**Table 5-5** Parameters

| Parameter | Type   | Description                                                                               |
|-----------|--------|-------------------------------------------------------------------------------------------|
| versions  | Object | <b>Definition</b><br>API version details.<br>For details, see <a href="#">Table 5-6</a> . |
| version   | Object | <b>Definition</b><br>API version details.<br>For details, see <a href="#">Table 5-6</a> . |

**Table 5-6** versions field data structure description

| Parameter | Type   | Description                                                                                                            |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------|
| id        | String | <b>Definition</b><br>API version.<br><b>Range</b><br>N/A                                                               |
| links     | Array  | <b>Definition</b><br>API version link information. Its value is empty.<br>For details, see <a href="#">Table 5-7</a> . |
| status    | String | <b>Definition</b><br>Version status.<br><b>Range</b><br>N/A                                                            |

| Parameter | Type   | Description                                                                                                                                                                                                      |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| updated   | String | <b>Definition</b><br>Version update time.<br><b>Range</b><br>The format is yyyy-mm-dd Thh:mm:ssZ.<br><b>T</b> is the separator between the calendar and the hourly notation of time. <b>Z</b> indicates the UTC. |

**Table 5-7** links field data structure description

| Parameter | Type   | Description                                                                                                               |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------|
| href      | String | <b>Definition</b><br>URL of the API.<br><b>Range</b><br>The value is "".                                                  |
| rel       | String | <b>Definition</b><br>URL type.<br><b>Range</b><br>The value is <b>self</b> , indicating that <b>href</b> is a local link. |

- Example normal response

```
{
 "version": {
 "id": "v1",
 "links": [],
 "status": "DEPRECATED",
 "updated": "2017-02-07T17:34:02Z"
 },
 "versions": {
 "id": "v1",
 "links": [],
 "status": "DEPRECATED",
 "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 this API, learn how to [authenticate](#) it.
- 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       | <b>Definition</b><br>Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

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

## 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 | <b>Definition</b><br>Database versions.<br>For details, see <a href="#">Table 5-10</a> . |

**Table 5-10** dataStores field data structure description

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | <b>Definition</b><br>Database version ID. The value is unique.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                                                      |
| name      | String | <b>Definition</b><br>Database version number.<br><b>Range</b> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul> |

- Example normal response

```
{
 "dataStores": [{
 "id": "87620726-6802-46c0-9028-a8785e1f1921",
 "name": "8.0.21"
 }, {
 "id": "87620726-6802-46c0-9028-a8785e1f1922",
 "name": "5.7.33"
 }, {
 "id": "e8a8b8cc-63f8-4fb5-8d4a-24c502317a62",
 "name": "5.6.51"
 }
]}
```

- 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 this API, learn how to [authenticate](#) it.
- 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}&is\_serverless={is\_serverless}

- Parameter description

**Table 5-11** Parameters

| Parameter     | Mandatory | Description                                                                                                                                                                                                      |
|---------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id    | Yes       | <b>Definition</b><br>Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| database_name | Yes       | <b>Definition</b><br>DB engine name.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"><li>• MySQL</li><li>• PostgreSQL</li><li>• SQLServer</li></ul> <b>Default Value</b><br>N/A   |

| Parameter     | Mandatory | Description                                                                                                                                                                                                                                                                                                                                      |
|---------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| version_name  | No        | <p><b>Definition</b><br/>Database version. For details about how to obtain the database version, see section <a href="#">Querying Version Information About a DB Engine</a>. (The minor version is supported.)</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p>                             |
| is_serverless | No        | <p><b>Definition</b><br/>Whether to query serverless specifications.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true</b>: Serverless specifications are queried.</li> <li>• <b>false</b>: Non-serverless specifications are queried.</li> </ul> <p><b>Default Value</b><br/>false</p> |
| spec_code     | No        | <p><b>Definition</b><br/>Specification code.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>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 | <b>Definition</b><br>Indicates the DB instance specifications information list.<br>For details, see <a href="#">Table 5-13</a> . |

**Table 5-13** flavors field data structure description

| Parameter | Type    | Description                                                                                                           |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------|
| vcpus     | String  | <b>Definition</b><br>Indicates the CPU size. For example, the value <b>1</b> indicates 1 vCPU.<br><b>Range</b><br>N/A |
| ram       | Integer | <b>Definition</b><br>Indicates the memory size in GB.<br><b>Range</b><br>N/A                                          |
| id        | String  | <b>Definition</b><br>Indicates the specification ID, which is unique.<br><b>Range</b><br>N/A                          |

| Parameter     | Type                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| spec_code     | String              | <p><b>Definition</b></p> <p>Indicates the resource specification code. Use <b>rds.mysql.m1.xlarge.rr</b> as an example.</p> <p>For more information, see <a href="#">DB Instance Classes</a>.</p> <ul style="list-style-type: none"> <li>• <b>rds</b>: indicates the RDS product.</li> <li>• <b>mysql</b>: indicates the DB engine.</li> <li>• <b>m1.xlarge</b>: indicates the high memory performance specifications.</li> <li>• <b>rr</b>: indicates read replicas (<b>.ha</b> indicates primary/standby DB instances).</li> <li>• <b>rha.rr</b> indicates HA read replicas. Example specification code: <b>rds.mysql.n1.large.4.rha.rr</b>. <ul style="list-style-type: none"> <li>– HA read replicas are available only for users with the open beta test (OBT) permission. You can contact customer service to apply for the permission.</li> <li>– For details about HA read replicas, see <a href="#">Introducing HA Read Replicas</a>.</li> </ul> </li> </ul> <p><b>Range</b></p> <p>N/A</p> |
| version_name  | Array               | <p><b>Definition</b></p> <p>Indicates the database version.</p> <p>Example value for the MySQL DB engine: ["5.6","5.7","8.0"]</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| instance_mode | String              | <p><b>Definition</b></p> <p>Indicates the instance type.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>ha</b>: indicates primary/standby instances.</li> <li>• <b>replica</b>: indicates read replicas.</li> <li>• <b>single</b>: indicates single DB instances.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| az_status     | Map<String, String> | <p><b>Definition</b></p> <p>Indicates the specification status in an AZ.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>normal</b>: indicates that the specifications in the AZ are available.</li> <li>• <b>unsupported</b>: indicates that the specifications are not supported by the AZ.</li> <li>• <b>sellout</b>: indicates that the specifications in the AZ are sold out.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Parameter  | Type                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| az_desc    | Map<String, String> | <b>Definition</b><br>Indicates the description of the AZ to which the specifications belong.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| group_type | String              | <b>Definition</b><br>Indicates instance specifications.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>normal</b>: general-enhanced</li> <li>• <b>normal2</b>: general-enhanced II</li> <li>• <b>armFlavors</b>: Kunpeng general-enhanced</li> <li>• <b>dedicateNormal (dedicatedNormalLocalssd)</b>: exclusive x86</li> <li>• <b>armLocalssd</b>: standard Kunpeng</li> <li>• <b>normalLocalssd</b>: standard x86</li> <li>• <b>general</b>: general-purpose</li> <li>• <b>dedicated</b>: <ul style="list-style-type: none"> <li>– For the MySQL DB engine: dedicated</li> <li>– For PostgreSQL and SQL Server DB engines: dedicated, which is only supported for cloud SSDs</li> </ul> </li> <li>• <b>rapid</b>: <ul style="list-style-type: none"> <li>– For the MySQL DB engine: dedicated (offline)</li> <li>– For PostgreSQL and SQL Server DB engines: dedicated, which is only supported for extreme SSDs</li> </ul> </li> <li>• <b>bigmem</b>: large-memory</li> <li>• <b>highPerformancePrivilegeEdition</b>: ultra-high I/O (advanced)</li> </ul> |

- Example normal response

```
{
 "flavors": [{
 "vcpus": "1",
 "ram": 2,
 "id": "2988b9cc-2aac-3a94-898c-14666702f129",
 "spec_code": "rds.mysql.c2.medium.rr",
 "version_name": ["5.6", "5.7", "8.0"],
 "instance_mode": "ha",
 "az_status": {
 "az1": "normal",
 "az2": "normal"
 },
 "az_desc": {
 "az1": "az1",
 "az2": "az2"
 }
 }],
}
```

```

 "group_type": "normal"
 },
 {
 "vcpus": "1",
 "ram": 2,
 "id": "2988b9cc-2aac-3a94-898c-14666702f130",
 "spec_code": "rds.mysql.c2.medium.rr",
 "version_name": ["5.6", "5.7", "8.0"],
 "instance_mode": "replica",
 "az_status": {
 "az1": "normal",
 "az2": "normal"
 },
 "az_desc": {
 "az1": "az1",
 "az2": "az2"
 },
 "group_type": "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 Querying the Storage Type of a Database

## Function

This API is used to query the storage type of a specified DB engine version.

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

## URI

- URI format  
GET /v3/{project\_id}/storage-type/{database\_name}?  
version\_name={version\_name}&ha\_mode={ha\_mode}
- Parameter description

**Table 5-14** Parameters

| Parameter     | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id    | Yes       | <p><b>Definition</b><br/>Project ID of a tenant in a region.<br/>To obtain the value, see <a href="#">Obtaining a Project ID</a>.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p>                                                                                                                                       |
| database_name | Yes       | <p><b>Definition</b><br/>DB engine.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value can be any of the following and is case-insensitive:</p> <ul style="list-style-type: none"> <li>• MySQL</li> <li>• PostgreSQL</li> <li>• SQLServer</li> </ul> <p><b>Default Value</b><br/>N/A</p>                                                                     |
| version_name  | Yes       | <p><b>Definition</b><br/>DB engine version.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>For details about how to obtain the DB engine version, see <a href="#">Querying Version Information About a DB Engine</a>.<br/>For the MySQL DB engine, the parameter indicates a major version, for example, 5.6, 5.7, or 8.0.</p> <p><b>Default Value</b><br/>N/A</p> |

| Parameter | Mandatory | Description                                                                                                                                                                                                     |
|-----------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ha_mode   | No        | <b>Definition</b><br>Primary/standby mode.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li>• single</li> <li>• ha</li> <li>• replica</li> </ul> <b>Default Value</b><br>N/A |

## Request

- Request parameters  
None
- URI example  
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/storage-type/mysql?version\_name=5.7&ha\_mode=ha

## Response

- Normal response

**Table 5-15** Parameters

| Parameter    | Type             | Description                                                                                                                                                      |
|--------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| storage_type | Array of objects | <b>Definition</b><br>Instance specifications.<br>For details, see <a href="#">Table 5-16</a> .                                                                   |
| dsspool_info | Array of objects | <b>Definition</b><br>DSS pool specifications.<br>For details, see <a href="#">Table 5-17</a> .<br><b>NOTE</b><br>Only Dedicated Cloud (DeC) users are supported. |



**Table 5-16** storage\_type field data structure description

| Parameter                  | Type                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name                       | String              | <p><b>Definition</b><br/>Storage type.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>ULTRAHIGH</b>: ultra-high I/O storage.</li> <li>• <b>CLOUDSSD</b>: cloud SSD storage. This storage type is supported only with general-purpose and dedicated instances.</li> <li>• <b>ESSD</b>: extreme SSD storage.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| az_status                  | Map<String, String> | <p><b>Definition</b><br/>Specification status in an AZ.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>normal</b>: indicates that the specifications in the AZ are available.</li> <li>• <b>unsupported</b>: indicates that the specifications are not supported by the AZ.</li> <li>• <b>sellout</b>: indicates that the specifications in the AZ are sold out.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| support_compute_group_type | List<String>        | <p><b>Definition</b><br/>Instance specifications.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>normal</b>: general-enhanced</li> <li>• <b>normal2</b>: general-enhanced II</li> <li>• <b>armFlavors</b>: Kunpeng general-enhanced</li> <li>• <b>dedicicateNormal</b>: exclusive x86</li> <li>• <b>armLocalssd</b>: standard Kunpeng</li> <li>• <b>normalLocalssd</b>: standard x86</li> <li>• <b>general</b>: general-purpose</li> <li>• <b>dedicated</b>: <ul style="list-style-type: none"> <li>– For the MySQL DB engine: dedicated</li> <li>– For PostgreSQL and SQL Server DB engines: dedicated, which is only supported for cloud SSDs</li> </ul> </li> <li>• <b>rapid</b>: <ul style="list-style-type: none"> <li>– For the MySQL DB engine: dedicated (offline)</li> <li>– For PostgreSQL and SQL Server DB engines: dedicated, which is only supported for extreme SSDs</li> </ul> </li> <li>• <b>bigmem</b>: large-memory</li> </ul> |

**Table 5-17** dsspool\_info field data structure description

| Parameter           | Type   | Description                                                                                                                                                                                        |
|---------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| az_name             | String | <b>Definition</b><br>Name of the AZ where the DSS pool is located.<br><b>Range</b><br>N/A                                                                                                          |
| free_capacity_gb    | String | <b>Definition</b><br>Available capacity of the DSS pool.<br><b>Range</b><br>N/A                                                                                                                    |
| dsspool_volume_type | String | <b>Definition</b><br>Disk type of the DSS pool.<br><b>Range</b><br>N/A                                                                                                                             |
| dsspool_id          | String | <b>Definition</b><br>ID of the DSS pool.<br><b>Range</b><br>N/A                                                                                                                                    |
| dsspool_status      | String | <b>Definition</b><br>DSS pool status.<br><b>Range</b> <ul style="list-style-type: none"> <li>• available</li> <li>• deploying</li> <li>• enlarging</li> <li>• frozen</li> <li>• sellout</li> </ul> |

- Example normal response

```
{
 "storage_type": [{
 "name": "COMMON",
 "az_status": {
 "az1": "normal",
 "az2": "normal"
 },
 "support_compute_group_type": [
 "normal",
 "normal2",
 "armFlavors"
]
 }],
 {
```

```

 "name": "ULTRAHIGH",
 "az_status": {
 "az1": "normal",
 "az2": "normal"
 },
 "support_compute_group_type": [
 "normal",
 "normal2",
 "armFlavors"
]
 },
 "dsspool_info": []
}

```

#### DeC user query response example

```

{
 "storage_type": [
 {
 "name": "COMMON",
 "az_status": {
 "az1xahz": "normal",
 "az3xahz": "normal"
 },
 "support_compute_group_type": [
 "normal",
 "normal2"
]
 },
 {
 "name": "ULTRAHIGH",
 "az_status": {
 "az1xahz": "normal",
 "az3xahz": "normal"
 },
 "support_compute_group_type": [
 "normal",
 "normal2"
]
 }
],
 "dsspool_info": [
 {
 "az_name": "az1xahz",
 "free_capacity_gb": "8656",
 "dsspool_volume_type": "ULTRAHIGH",
 "dsspool_id": "f5f84ed7-6f19-4bd4-99d7-b450ad6cc4dd",
 "dsspool_status": "available"
 }
]
}

```

- 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 Querying Storage Usage of a DB Instance

### Function

This API is used to query storage usage of a DB instance.

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

### Constraints

This API is available only for the MySQL and SQL Server DB engines.

To query the storage usage of an RDS for PostgreSQL instance, you can call the API for [querying DB instances](#) and check the value of the response parameter `storage_used_space`.

### URI

- URI format  
GET /v3/{project\_id}/instances/{instance\_id}/storage-used-space
- Parameter description

**Table 5-18** Parameters

| Parameter   | Mandatory | Description                                                                                                                                                                                                      |
|-------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | <b>Definition</b><br>Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| instance_id | Yes       | <b>Definition</b><br>ID of the instance to be queried.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                        |

## Request

- Request parameters  
None
- URI example  
GET `https://{Endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/314958daf6904c478d17c642ac209abbin01/storage-used-space`

## Response

- Normal response

**Table 5-19** Parameters

| Parameter | Type   | Description                                                      |
|-----------|--------|------------------------------------------------------------------|
| node_id   | String | <b>Definition</b><br>Instance node ID.<br><b>Range</b><br>N/A    |
| used      | String | <b>Definition</b><br>Used storage, in GB.<br><b>Range</b><br>N/A |

- Example normal response  

```
{
 "node_id" : "0314958daf6904c478d17c642ac209abbin01",
 "used" : "14.21"
}
```
- 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 DB Instance Management

## 5.6.1 Creating a DB Instance

### Function

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

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

This API allows you to set the X-Client-Token request header in the HTTP request header when you create an RDS for MySQL instance, to ensure the request idempotence. For details, see [Idempotent Requests](#).

### URI

- URI format  
POST /v3/{project\_id}/instances
- Parameter description

**Table 5-20** Parameters

| Parameter  | Mandatory | Description                                                                                                                                                                                                      |
|------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | <b>Definition</b><br>Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

## Request

**Table 5-21** Parameters (creating single-node, primary/standby, and cluster instances, except RDS for SQL Server instances configured with the AD domain)

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | String | <p><b>Definition</b></p> <p>Specifies the DB instance name. Instances of the same type can have the same name under the same tenant.</p> <p><b>Constraints</b></p> <p>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>RDS for MySQL: The DB instance name must be 4 to 64 bytes long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), periods (.), and underscores (_).</li> <li>RDS for PostgreSQL and RDS for SQL Server: The DB instance name must be 4 to 64 bytes long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), and underscores (_).</li> </ul> <p><b>Default Value</b></p> <p>N/A</p> |
| datastore | Yes       | Object | <p><b>Definition</b></p> <p>Specifies the database information.</p> <p>For details, see <a href="#">Table 5-23</a>.</p> <p><b>Constraints</b></p> <p>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                          |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| flavor_ref | Yes       | String | <p><b>Definition</b><br/>Specifies the specification code.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value cannot be empty. For details, see <b>spec_code</b> in <a href="#">Table 5-13</a> in section <a href="#">Querying Database Specifications</a>.</p> <p><b>Default Value</b><br/>N/A</p> |
| volume     | Yes       | Object | <p><b>Definition</b><br/>Specifies instance storage.<br/>For details, see <a href="#">Table 5-26</a>.</p> <p><b>Constraints</b><br/>N/A</p>                                                                                                                                                                          |
| region     | Yes       | String | <p><b>Definition</b><br/>Specifies the region ID.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value cannot be empty. To obtain this value, see <a href="#">Regions and Endpoints</a>.</p> <p><b>Default Value</b><br/>N/A</p>                                                                      |



| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| availability_zone | Yes       | String | <p><b>Definition</b></p> <p>Specifies the AZ ID. If the DB instance is not a single-node instance, you need to specify an AZ for each node of the instance and separate the AZs with commas (,). For details, see the example.</p> <p>The AZ ID can be obtained from the response returned after the API in <a href="#">Querying Database Specifications</a> is called.</p> <p><b>Constraints</b></p> <p>N/A</p> <p><b>Range</b></p> <p><b>Default Value</b></p> <p>N/A</p> |
| vpc_id            | Yes       | String | <p><b>Definition</b></p> <p>Specifies the VPC ID.</p> <p><b>Constraints</b></p> <p>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>Method 1: Log in to the VPC console and view the VPC ID on the VPC details page.</li> <li>Method 2: See the "Querying VPCs" section in the <i>Virtual Private Cloud API Reference</i>.</li> </ul> <p><b>Default Value</b></p> <p>N/A</p>                                                                              |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| subnet_id | Yes       | String | <p><b>Definition</b><br/>Specifies the network ID of the subnet.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page. You can view the network ID on the displayed page.</li> <li>Method 2: See the "Querying Subnets" section in the <i>Virtual Private Cloud API Reference</i>.</li> </ul> <p><b>Default Value</b><br/>N/A</p> |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| security_group_id | Yes       | String | <p><b>Definition</b></p> <p>Specifies the security group which the RDS DB instance belongs to. To obtain this parameter value, use either of the following methods:</p> <p><b>Constraints</b></p> <p>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>Method 1: Log in to VPC console. Choose <b>Access Control &gt; Security Groups</b> 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.</li> <li>Method 2: See the "Querying Security Groups" section in the <i>Virtual Private Cloud API Reference</i>.</li> </ul> <p>To use multiple security groups for an RDS for MySQL instance, <a href="#">submit a service ticket</a> to apply for required permissions. You can add up to 10 security group IDs for each instance and separate them with commas (,).</p> <p><b>Default Value</b></p> <p>N/A</p> |

| Parameter        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                               |
|------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ha               | No        | Object | <p><b>Definition</b><br/>Specifies the HA configuration, which is used when you create primary/standby instances.</p> <p>For details, see <a href="#">Table 5-24</a>.</p> <p><b>Constraints</b><br/>N/A</p>                                                                               |
| configuration_id | No        | String | <p><b>Definition</b><br/>Specifies the parameter template ID.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>For details, see <b>id</b> in <a href="#">Table 5-562</a> in section <a href="#">Obtaining a Parameter Template List</a>.</p> <p><b>Default Value</b><br/>N/A</p> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| port      | No        | String | <p><b>Definition</b></p> <p>Specifies the database port information.</p> <p><b>Constraints</b></p> <p>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• RDS for MySQL instances can use database ports 1024 to 65535, excluding 12017 and 33071, which are reserved for RDS system use.</li> <li>• RDS for PostgreSQL instances can use database ports 2100 to 9500.</li> <li>• For RDS for SQL Server 2022 Enterprise Edition, 2022 Standard Edition, 2022 Web Edition, 2019 Enterprise Edition, 2019 Standard Edition, 2019 Web Edition, 2017 Enterprise Edition, 2017 Standard Edition, and 2017 Web Edition, the port number can be set to 1433 or 2100 to 9500 (excluding 5050, 5353, 5355, 5985, and 5986). For other editions, the port number can be set to 1433 or 2100 to 9500 (excluding 5355, 5985, and 5986).</li> </ul> <p><b>Default Value</b></p> <p>If this parameter is not set, the default value is as follows:</p> <ul style="list-style-type: none"> <li>• RDS for MySQL: <b>3306</b></li> </ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |        | <ul style="list-style-type: none"> <li>RDS for PostgreSQL: <b>5432</b></li> <li>RDS for SQL Server: <b>1433</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| password  | No        | String | <p><b>Definition</b><br/>Specifies the database password.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>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"> <li>RDS for MySQL: ~!@#\$%^*_-=+?,()&amp;</li> <li>RDS for SQL Server: ~!@#\$%^*_-=+?,</li> <li>RDS for PostgreSQL: ~!@#\$%^*_-=+?,</li> </ul> <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> <p><b>Default Value</b><br/>N/A</p> |

| Parameter             | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| backup_strategy       | No        | Object | <p><b>Definition</b><br/>Specifies the advanced backup policy.<br/>For details, see <a href="#">Table 5-25</a>.</p> <p><b>Constraints</b><br/>N/A</p>                                                                                                                                                                                                     |
| enterprise_project_id | No        | String | <p><b>Definition</b><br/>Specifies the enterprise project ID.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>For details, see <b>id</b> in the <b>enterprise_project field data structure</b> table in <a href="#">Querying Enterprise Projects</a> of the <i>Enterprise Management API Reference</i>.</p> <p><b>Default Value</b><br/>N/A</p> |
| disk_encryption_id    | No        | String | <p><b>Definition</b><br/>Specifies the ID of the key used for disk encryption.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>This parameter is left blank by default.</p>                                                                                                                                 |

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_vip    | No        | String | <p><b>Definition</b><br/>Specifies the floating IP address of a DB instance. Currently, only IPv4 addresses are supported.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page. View the subnet CIDR block and select an IP address that is not in use.</li> <li>Method 2: See the "Querying Subnets" section in the <i>Virtual Private Cloud API Reference</i>.</li> </ul> <p><b>Default Value</b><br/>This parameter is left blank by default.</p> |
| charge_info | No        | Object | <p><b>Definition</b><br/>Specifies the billing information, which is yearly/monthly or pay-per-use (default setting).<br/>For details, see <a href="#">Table 5-27</a>.</p> <p><b>Constraints</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                 |



| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| time_zone     | No        | String | <p><b>Definition</b><br/>Specifies the UTC time zone.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>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 value can be UTC+08:00 rather than UTC+08:30.</p> <p><b>Default Value</b><br/>If this parameter is not specified, the time zone of each engine is as follows:</p> <ul style="list-style-type: none"> <li>MySQL: uses UTC by default.</li> <li>PostgreSQL: uses UTC by default.</li> <li>Microsoft SQL Server: uses UTC by default.</li> </ul> |
| restore_point | No        | Object | <p><b>Definition</b><br/>Specifies the restoration information. This parameter is mandatory when data is restored to a new instance.<br/>For details, see <a href="#">Table 5-29</a>.</p> <p><b>Constraints</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                                                                         |

| Parameter          | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tags               | No        | Array of objects | <p><b>Definition</b></p> <p>Specifies the tag list. DB instances are created based on tag keys and values.</p> <ul style="list-style-type: none"> <li>• <i>{key}</i> indicates the tag key. It must be unique and cannot be empty.</li> <li>• <i>{value}</i> indicates the tag value, which can be empty.</li> </ul> <p>If you want to create DB instances with multiple tag key-value pairs, separate them with commas (.). A maximum of 20 key-value pairs can be added.</p> <p>For details, see <a href="#">Table 5-28</a>.</p> <p><b>Constraints</b></p> <p>N/A</p> |
| unchangeable_param | No        | Object           | <p><b>Definition</b></p> <p>Specifies the list of unchangeable parameters. The unchangeable parameters need to be specified before database initialization and cannot be modified after being specified.</p> <p>For details, see <a href="#">Table 5-30</a>.</p> <p><b>Constraints</b></p> <p>N/A</p>                                                                                                                                                                                                                                                                   |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| collation | No        | String  | <p><b>Definition</b></p> <p>Specifies the collation of an RDS for SQL Server instance.</p> <p><b>Constraints</b></p> <p>This parameter applies only to RDS for SQL Server DB instances.</p> <p><b>Range</b></p> <p>For details, see <a href="#">Querying the Available SQL Server Character Set</a>.</p> <p><b>Default Value</b></p> <p>N/A</p>                                                                                                                                                                                                                                                                                                                                                                    |
| dry_run   | No        | Boolean | <p><b>Definition</b></p> <p>Specifies whether DB instances will not be created after the request is checked.</p> <p><b>Constraints</b></p> <p>This parameter is supported with the MySQL DB engine only.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> DB instances will not be created after the request is checked. <ul style="list-style-type: none"> <li>– If the check is successful, status code 202 is returned.</li> <li>– If the check fails, an error code is returned. For details, see <a href="#">Error Codes</a>.</li> </ul> </li> <li>• <b>false:</b> DB instances will be created after the check is successful.</li> </ul> <p><b>Default Value</b></p> <p>N/A</p> |

| Parameter       | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| count           | No        | Integer | <p><b>Definition</b><br/>Specifies the number of DB instances to be created in a batch.</p> <p><b>Constraints</b><br/>This parameter is unavailable when you create read replicas.</p> <p><b>Range</b><br/>1–50</p> <p><b>Default Value</b><br/>N/A</p>                                                                                                                                                                          |
| is_auto_upgrade | No        | Boolean | <p><b>Definition</b><br/>Whether to enable automatic minor version upgrade.</p> <p><b>Constraints</b><br/>This parameter is available only for RDS for PostgreSQL DB instances.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> Automatic minor version upgrade is enabled.</li> <li>• <b>false:</b> Automatic minor version upgrade is disabled.</li> </ul> <p><b>Default Value</b><br/>false</p> |

**Table 5-22** Parameters for creating read replicas

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name          | Yes       | String | <p><b>Definition</b><br/>Specifies the DB instance name.</p> <p>DB instances of the same type can have same names under the same tenant.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• RDS for MySQL: The DB instance name must be 4 to 64 bytes long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), periods (.), and underscores (_).</li> <li>• RDS for PostgreSQL and RDS for SQL Server: The DB instance name must be 4 to 64 bytes long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), and underscores (_).</li> </ul> <p><b>Default Value</b><br/>N/A</p> |
| replica_of_id | Yes       | String | <p><b>Definition</b><br/>Specifies the ID of the primary DB instance.</p> <p><b>Constraints</b><br/>This parameter is mandatory when you create read replicas and is unavailable in other scenarios.</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter             | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                    |
|-----------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| flavor_ref            | Yes       | String | <b>Definition</b><br>Specifies the specification code.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value cannot be empty. For details, see <b>spec_code</b> in <a href="#">Table 5-13</a> in section <a href="#">Querying Database Specifications</a> .<br><b>Default Value</b><br>N/A |
| volume                | Yes       | Object | <b>Definition</b><br>Specifies the volume information.<br>For details, see <a href="#">Table 5-26</a> .<br><b>Constraints</b><br>N/A                                                                                                                                                           |
| availability_zone     | Yes       | String | <b>Definition</b><br>Specifies the AZ ID.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The AZ ID can be obtained from the response returned after the API in <a href="#">Querying Database Specifications</a> is called.<br><b>Default Value</b><br>N/A                                     |
| enterprise_project_id | No        | String | <b>Definition</b><br>Specifies the project ID.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                                                                                              |

| Parameter          | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| disk_encryption_id | No        | String | <p><b>Definition</b><br/>Specifies the ID of the key used for disk encryption.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>This parameter is left blank by default.</p>                                                                                                                                                                                                                     |
| region             | No        | String | <p><b>Definition</b><br/>Specifies the region ID.</p> <p><b>Constraints</b><br/>Currently, read replicas can be created only in the same region as that of the primary DB instance.</p> <p><b>Range</b><br/>The value cannot be empty. To obtain this value, see <a href="#">Regions and Endpoints</a>.</p> <p><b>Default Value</b><br/>N/A</p>                                                                                               |
| charge_info        | No        | Object | <p><b>Definition</b><br/>Specifies the billing information, which is yearly/monthly or pay-per-use (default setting).<br/>For details, see <a href="#">Table 5-27</a>.</p> <p><b>Constraints</b><br/>To create RDS for MySQL and RDS for PostgreSQL read replicas billed on a yearly/monthly basis, contact customer service to apply for the required permissions.<br/>RDS for SQL Server does not support yearly/monthly read replicas.</p> |

Table 5-23 datastore field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                       |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | <b>Definition</b><br>Specifies the DB engine.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"><li>MySQL</li><li>PostgreSQL</li><li>SQLServer</li></ul> <b>Default Value</b><br>N/A |



| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| version   | Yes       | String | <p><b>Definition</b><br/>Specifies the database version.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>For RDS for MySQL, the value can be <b>5.7</b> or <b>8.0</b>.</li> <li>For RDS for PostgreSQL, 10, 11, 12, 13, 14, and 15 are supported. RDS for PostgreSQL 9.5 and 9.6 are only for installed base operations.</li> <li>For RDS for SQL Server, 2022 Enterprise Edition, 2022 Standard Edition, 2022 Web Edition (these 2022 editions require you to contact customer service), 2019 Enterprise Edition, 2019 Standard Edition, 2019 Web Edition, 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, 2014 Web Edition, and 2016 Web Edition are supported. Example</li> </ul> |

| Parameter        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                 |
|------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  |           |        | <p>value: 2014_SE.<br/>2008 R2 Enterprise Edition and 2008 R2 Web Edition are only for installed base operations.</p> <p>For details about supported database versions, see section <a href="#">Querying Version Information About a DB Engine</a>.</p> <p><b>Default Value</b><br/>N/A</p> |
| complete_version | No        | String | <p><b>Definition</b><br/>Specifies the complete version number.</p> <p><b>Constraints</b><br/>This parameter is returned only when the DB engine is PostgreSQL.</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p>                                                         |

**Table 5-24** ha field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                          |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| mode      | Yes       | String | <p><b>Definition</b><br/>Specifies the primary/standby instance type.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/><b>HA</b> (case-insensitive)</p> <p><b>Default Value</b><br/>N/A</p> |

| Parameter        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| replication_mode | Yes       | String | <p><b>Definition</b><br/>Specifies the replication mode for the standby DB instance.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>For RDS for MySQL, the value is <b>async</b> or <b>semisync</b>.</li> <li>For RDS for PostgreSQL, the value is <b>async</b> or <b>sync</b>.</li> <li>For RDS for SQL Server, the value is <b>sync</b>.</li> </ul> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li><b>async</b> indicates the asynchronous replication mode.</li> <li><b>semisync</b> indicates the semi-synchronous replication mode.</li> <li><b>sync</b> indicates the synchronous replication mode.</li> </ul> <p><b>Default Value</b><br/>N/A</p> |

Table 5-25 backup\_strategy field data structure description

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_time | Yes       | String | <p><b>Definition</b></p> <p>Specifies the backup time window. Automated backups will be triggered during the backup time window.</p> <p><b>Constraints</b></p> <p>N/A</p> <p><b>Range</b></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 the UTC time.</p> <ul style="list-style-type: none"><li>• The <b>HH</b> value must be 1 greater than the <b>hh</b> value.</li><li>• The values of <b>mm</b> and <b>MM</b> must be the same and must be set to any of the following: <b>00</b>, <b>15</b>, <b>30</b>, or <b>45</b>.</li></ul> <p>Example value:</p> <ul style="list-style-type: none"><li>• 08:15-09:15</li><li>• 23:00-00:00</li></ul> <p><b>Default Value</b></p> <p>N/A</p> |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| keep_days | No        | Integer | <p><b>Definition</b><br/>Specifies the retention days for specific backup files.</p> <p><b>Constraints</b><br/>The automated backup policy cannot be disabled for primary/standby DB instances of RDS for SQL Server.</p> <p><b>Range</b><br/>0-732 If this parameter is not specified or set to <b>0</b>, the automated backup policy is disabled. To extend the retention period, contact customer service. Automated backups can be retained for up to 2,562 days.</p> <p><b>Default Value</b><br/>N/A</p> |

**Table 5-26** volume field data structure description

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String  | <p><b>Definition</b><br/>Specifies the storage type.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>Its value can be any of the following and is case-sensitive:</p> <ul style="list-style-type: none"> <li>• <b>ULTRAHIGH</b>: ultra-high I/O storage.</li> <li>• <b>CLOUDSSD</b>: cloud SSD storage. This storage type is supported only with general-purpose and dedicated DB instances.</li> <li>• <b>ESSD</b>: extreme SSD storage.</li> </ul> <p><b>Default Value</b><br/>N/A</p> |
| size      | Yes       | Integer | <p><b>Definition</b><br/>Specifies the volume size.</p> <p><b>Constraints</b><br/>For read replicas, this parameter is invalid. The volume size is the same as that of the primary DB instance by default.</p> <p><b>Range</b><br/>40–4000, in GB. The value must be a multiple of 10.</p> <p><b>Default Value</b><br/>N/A</p>                                                                                                                                                                     |

**Table 5-27** charge\_info field data structure description

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| charge_mode | Yes       | String | <p><b>Definition</b><br/>Specifies the billing mode.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>prePaid</b>: indicates the yearly/monthly billing mode.</li> <li>• <b>postPaid</b>: indicates the pay-per-use billing mode.</li> </ul> <p><b>Default Value</b><br/>N/A</p>                                                                                            |
| period_type | No        | String | <p><b>Definition</b><br/>Specifies the subscription type.</p> <p><b>Constraints</b><br/>This parameter is valid and mandatory if <b>charge_mode</b> is set to <b>prePaid</b>.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>month</b>: indicates that the subscription unit is month.</li> <li>• <b>year</b>: indicates that the subscription unit is year.</li> </ul> <p><b>Default Value</b><br/>N/A</p> |

| Parameter  | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_num | No        | Integer | <p><b>Definition</b></p> <p>Specifies the subscription period.</p> <p><b>Constraints</b></p> <p>This parameter is valid and mandatory if <b>charge_mode</b> is set to <b>prePaid</b>.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>When <b>period_type</b> is set to <b>month</b>, the parameter value ranges from <b>1</b> to <b>9</b>.</li> <li>When <b>period_type</b> is set to <b>year</b>, the parameter value ranges from <b>1</b> to <b>3</b> or can be <b>5</b>.<br/>Only RDS for MySQL supports the 5-year subscription. The constraints are as follows: <ul style="list-style-type: none"> <li>You need to contact customer service to apply for the required permissions.</li> <li>This setting is supported only in CN North-Beijing4, CN East-Shanghai1, CN South-Guangzhou, and CN Southwest-Guiyang1.</li> <li>This setting is supported only with general-purpose instances.</li> </ul> </li> </ul> <p><b>Default Value</b></p> <p>N/A</p> |



**Table 5-28** tags field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | <p><b>Definition</b><br/>Specifies the tag key.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value must consist of 1 to 128 Unicode characters.<br/>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>.</p> <p><b>Default Value</b><br/>N/A</p> |
| value     | Yes       | String | <p><b>Definition</b><br/>Specifies the tag value.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>It can be left blank or contain a maximum of 255 Unicode characters.<br/>It can contain letters, digits, spaces, and special characters <code>._:=-@</code>.</p> <p><b>Default Value</b><br/>N/A</p>                                                                 |

**Table 5-29** restore\_point field data structure description

| Parameter   | Mandatory | Type   | Description                                                                                                                                                      |
|-------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_id | Yes       | String | <p><b>Definition</b><br/>Specifies the source instance ID.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p> |

| Parameter    | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type         | Yes       | String  | <p><b>Definition</b><br/>Specifies the restoration mode.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>backup</b>: indicates using backup files for restoration. In this mode, <b>type</b> is optional and <b>backup_id</b> is mandatory.</li> <li>• <b>timestamp</b>: indicates the point-in-time restoration. In this mode, <b>type</b> is mandatory and <b>restore_time</b> is mandatory.</li> </ul> <p><b>Default Value</b><br/>N/A</p> |
| backup_id    | No        | String  | <p><b>Definition</b><br/>Specifies the ID of the backup to be restored.</p> <p><b>Constraints</b><br/>This parameter must be specified when backups are used for restoration.</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p>                                                                                                                                                                                                                                                   |
| restore_time | No        | Integer | <p><b>Definition</b><br/>Specifies the time point of data restoration in the UNIX timestamp. The unit is millisecond and the time zone is UTC.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p>                                                                                                                                                                                                                                                |

| Parameter     | Mandatory | Type               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|-----------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database_name | No        | Map<String,String> | <p><b>Definition</b><br/>Specifies the database name.</p> <p><b>Constraints</b><br/>This parameter is supported only for Microsoft SQL Server databases. If this parameter is specified, you can restore specific databases and rename new databases.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>The new database names must be different from the original database names. If you do not customize the database names, data will be restored to the original databases by default. If this parameter is not specified, all databases are restored by default. Example value: "database_name": {"<i>Original database name</i>": "<i>New database name</i>"}</li> <li>New database names cannot contain the following fields (case-insensitive): rdsadmin, master, msdb, tempdb, model, and resource.</li> <li>Each database name must consist of 1 to 64 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed.</li> </ul> <p><b>Default Value</b><br/>N/A</p> |

**Table 5-30** unchangeable\_param field data structure description

| Parameter              | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| lower_case_table_names | No        | String | <b>Definition</b><br>Whether table names are case sensitive.<br><b>Constraints</b><br>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.<br><b>Range</b> <ul style="list-style-type: none"><li>• <b>0</b>: Table names are fixed and case sensitive.</li><li>• <b>1</b>: Table names are stored in lowercase and are case insensitive.</li></ul> <b>Default Value</b><br>1 |

## Example Request

- Create 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": "CLOUDSSD",
 "size": 100
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a",
 "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",
}
```

```

"enterprise_project_id": "fdsa-3rds",
"time_zone": "UTC+04:00",
"tags": [
 {
 "key": "key1",
 "value": "value1"
 },
 {
 "key": "key2",
 "value": "value2"
 }
],
"dry_run": false,
"count": 12
}

```

- Create an RDS for PostgreSQL single-node instance.

```

{
 "name": "rds-instance-rep2",
 "datastore": {
 "type": "PostgreSQL",
 "version": "10"
 },
 "flavor_ref": "rds.pg.s1.large",
 "volume": {
 "type": "CLOUDSSD",
 "size": 100
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a",
 "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
 "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
 "data_vip": "192.168.0.147",
 "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": "Test@12345678",
 "configuration_id": "452408-ef4b-44c5-94be-305145fg",
 "enterprise_project_id": "fdsa-3rds",
 "time_zone": "UTC+04:00",
 "tags": [
 {
 "key": "key1",
 "value": "value1"
 },
 {
 "key": "key2",
 "value": "value2"
 }
]
}

```

- Create an RDS for MySQL 8.0 single-node instance with initialization parameters specified.

```

{
 "name": "rds-instance-rep2",
 "datastore": {
 "type": "MySQL",
 "version": "8.0"
 },
 "flavor_ref": "rds.mysql.s1.large",
 "volume": {
 "type": "CLOUDSSD",

```

```

 "size": 100
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a",
 "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",
 "enterprise_project_id": "fdsa-3rds",
 "time_zone": "UTC+04:00",
 "tags": [
 {
 "key": "key1",
 "value": "value1"
 },
 {
 "key": "key2",
 "value": "value2"
 }
],
 "unchangeable_param": {
 "lower_case_table_names": "1"
 },
 "dry_run": false,
 "count": 12
}

```

- Create an RDS for SQL Server single-node instance with the collation specified.

```

{
 "name": "rds-instance-rep2",
 "datastore": {
 "type": "SQLServer",
 "version": "2014_SE"
 },
 "flavor_ref": "rds.mssql.se.m3.large.8",
 "volume": {
 "type": "ULTRAHIGH",
 "size": 100
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a",
 "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"
 },
 "collation": "Cyrillic_General_CI_AS",
 "password": "****",
 "configuration_id": "452408-ef4b-44c5-94be-305145fg",
 "enterprise_project_id": "fdsa-3rds",
}

```

```

"time_zone": "UTC+04:00",
"tags": [
 {
 "key": "key1",
 "value": "value1"
 },
 {
 "key": "key2",
 "value": "value2"
 }
],
}

```

- Create 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": "CLOUDSSD",
 "size": 100
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a,ap-southeast",
 "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",
 "enterprise_project_id": "fdsa-3rds",
 "time_zone": "UTC+04:00",
 "tags": [
 {
 "key": "key1",
 "value": "value1"
 },
 {
 "key": "key2",
 "value": "value2"
 }
],
 "dry_run": false,
 "count": 12
}

```

- Create an RDS for MySQL read replica.

```

{
 "name": "rds-instance-rep2",
 "replica_of_id": "afdsad-fds-fdsagin01",
 "flavor_ref": "rds.mysql.s1.large.rr",
 "volume": {
 "type": "CLOUDSSD",
 "size": 100
 }
}

```

```
},
"disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
"region": "ap-southeast-1",
"availability_zone": "ap-southeast-1a",
"enterprise_project_id": "fdsa-3rds",
"tags": [
 {
 "key": "key1",
 "value": "value1"
 },
 {
 "key": "key2",
 "value": "value2"
 }
]
}
```

Response

- Normal response

Table 5-31 Parameters

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                               |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance  | Object | <b>Definition</b><br>Indicates the DB instance information.<br>For details, see <a href="#">Table 5-32</a> .                                                                                                                                                                                              |
| job_id    | String | <b>Definition</b><br>Indicates the ID of the DB instance creation task.<br>For details about how to query task details, see <a href="#">Obtaining Information About a Task with a Specified ID</a> .<br>This parameter is returned only when pay-per-use DB instances are created.<br><b>Range</b><br>N/A |



| Parameter | Type   | Description                                                                                                                                      |
|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| order_id  | String | <b>Definition</b><br>Indicates the order ID. This parameter is returned for the creation of a yearly/monthly DB instance.<br><b>Range</b><br>N/A |

**Table 5-32** instance field data structure description

| Parameter | Type   | Description                                                                                                                                                                                                                                            |
|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | <b>Definition</b><br>Indicates the DB instance ID. If instances are created in batches, multiple instance IDs separated by commas (,) are returned for the MySQL DB engine. For other DB engines, this parameter is left blank.<br><b>Range</b><br>N/A |
| name      | String | <b>Definition</b><br>Indicates the DB instance name. DB instances of the same type can have same names under the same tenant.<br><b>Range</b><br>N/A                                                                                                   |

| Parameter        | Type   | Description                                                                                                                                                                                                                                         |
|------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status           | String | <p><b>Definition</b><br/>Indicates the DB instance status.</p> <p><b>Range</b><br/>For example, <b>BUILD</b> indicates that the DB instance is being created.</p> <p>This parameter is returned only when pay-per-use DB instances are created.</p> |
| datastore        | Object | <p><b>Definition</b><br/>Indicates the database information.</p> <p>For details, see <a href="#">Table 5-33</a>.</p>                                                                                                                                |
| ha               | Object | <p><b>Definition</b><br/>Indicates the HA configuration parameters. This parameter is returned only when primary/standby DB instances are created.</p> <p>For details, see <a href="#">Table 5-34</a>.</p>                                          |
| configuration_id | String | <p><b>Definition</b><br/>Indicates the parameter template ID. This parameter is returned only when a custom parameter template is used during DB instance creation.</p> <p><b>Range</b><br/>N/A</p>                                                 |
| port             | String | <p><b>Definition</b><br/>Indicates the database port.</p> <p><b>Range</b><br/>Same as the request parameter.</p>                                                                                                                                    |

| Parameter             | Type   | Description                                                                                                                                                                                                                        |
|-----------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| backup_strategy       | Object | <b>Definition</b><br>Indicates the automated backup policy.<br>For details, see <a href="#">Table 5-35</a> .                                                                                                                       |
| enterprise_project_id | String | <b>Definition</b><br>Indicates the project ID.<br><b>Range</b><br>N/A                                                                                                                                                              |
| disk_encryption_id    | String | <b>Definition</b><br>Indicates the ID of the key used for disk encryption.<br><b>Range</b><br>This parameter is available only when you specify this parameter during instance creation. By default, this parameter is left blank. |
| flavor_ref            | String | <b>Definition</b><br>Indicates the specification code.<br><b>Range</b><br>The value cannot be empty. For details, see <b>spec_code</b> in <a href="#">Table 5-13</a> in section <a href="#">Querying Database Specifications</a> . |
| volume                | Object | <b>Definition</b><br>Indicates the volume information.<br>For details, see <a href="#">Table 5-36</a> .                                                                                                                            |
| region                | String | <b>Definition</b><br>Indicates the region ID.<br><b>Range</b><br>N/A                                                                                                                                                               |

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| availability_zone | String | <p><b>Definition</b><br/>Indicates the AZ ID.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                      |
| vpc_id            | String | <p><b>Definition</b><br/>Indicates the VPC ID.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>Method 1: Log in to the VPC console and view the VPC ID on the VPC details page.</li> <li>Method 2: See the "Querying VPCs" section in the <i>Virtual Private Cloud API Reference</i>.</li> </ul>                                                                                    |
| subnet_id         | String | <p><b>Definition</b><br/>Indicates the network ID of the subnet.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page. You can view the network ID on the displayed page.</li> <li>Method 2: See the "Querying Subnets" section in the <i>Virtual Private Cloud API Reference</i>.</li> </ul> |

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| security_group_id | String | <p><b>Definition</b></p> <p>Indicates the security group which the RDS DB instance belongs to. To obtain this parameter value, use either of the following methods:</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>Method 1: Log in to VPC console. Choose <b>Access Control &gt; Security Groups</b> in the navigation pane. On the displayed page, click the target security group. You can view the security group ID on the displayed page.</li> <li>Method 2: See the "Querying Security Groups" section in the <i>Virtual Private Cloud API Reference</i>.</li> </ul> |
| charge_info       | Object | <p><b>Definition</b></p> <p>Indicates the billing information, which is yearly/monthly or pay-per-use.</p> <p>For details, see <a href="#">Table 5-37</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                              |
| collation         | String | <p><b>Definition</b></p> <p>Indicates the collation set for RDS for SQL Server.</p> <p><b>Range</b></p> <p>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Parameter     | Type   | Description                                                                                                                                                                       |
|---------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| restore_point | Object | <b>Definition</b><br>Indicates the restoration information. This parameter is mandatory when data is restored to a new instance.<br>For details, see <a href="#">Table 5-38</a> . |

**Table 5-33** datastore field data structure description

| Parameter | Type   | Description                                                                                                                                                                                         |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String | <b>Definition</b><br>Indicates the DB engine.<br><b>Range</b> <ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>SQLServer</li> </ul>                                        |
| version   | String | <b>Definition</b><br>Indicates the database version.<br><b>Range</b><br>For details about supported database versions, see section <a href="#">Querying Version Information About a DB Engine</a> . |

**Table 5-34** ha field data structure description

| Parameter | Type   | Description                                                                             |
|-----------|--------|-----------------------------------------------------------------------------------------|
| mode      | String | <b>Definition</b><br>Indicates the primary/standby instance type.<br><b>Range</b><br>Ha |

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

**Table 5-35** backupStrategy field data structure description

| Parameter  | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_time | String | <p><b>Definition</b></p> <p>Indicates the backup time window. Automated backups will be triggered during the backup time window.</p> <p><b>Range</b></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 the UTC time.</p> <ul style="list-style-type: none"> <li>The <b>HH</b> value must be 1 greater than the <b>hh</b> value.</li> <li>The values of <b>mm</b> and <b>MM</b> must be the same and must be set to any of the following: <b>00</b>, <b>15</b>, <b>30</b>, or <b>45</b>.</li> </ul> <p>Example value:</p> <ul style="list-style-type: none"> <li>08:15-09:15</li> <li>23:00-00:00</li> </ul> <p>If <b>backup_strategy</b> in the request body is empty, <b>02:00-03:00</b> is returned for <b>start_time</b> by default.</p> |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| keep_days | Integer | <p><b>Definition</b><br/>Indicates the retention days for specific backup files.</p> <p><b>Range</b><br/>0-732 If this parameter is not specified or set to <b>0</b>, the automated backup policy is disabled. To extend the retention period, contact customer service. Automated backups can be retained for up to 2,562 days.</p> <p>If <b>backup_strategy</b> in the request body is empty, <b>7</b> is returned for <b>keep_days</b> by default.</p> |

**Table 5-36** volume field data structure description

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String  | <p><b>Definition</b><br/>Storage type.</p> <p><b>Range</b><br/>The value is case-sensitive.</p> <ul style="list-style-type: none"> <li>• <b>ULTRAHIGH</b>: ultra-high I/O storage.</li> <li>• <b>CLOUDSSD</b>: cloud SSD storage. This storage type is supported only with general-purpose and dedicated instances.</li> <li>• <b>ESSD</b>: extreme SSD storage.</li> </ul> |
| size      | Integer | <p><b>Definition</b><br/>Storage capacity.</p> <p><b>Range</b><br/>40-4000, in GB. The value must be a multiple of 10.</p>                                                                                                                                                                                                                                                  |



**Table 5-37** chargeInfo field data structure description

| Parameter   | Type    | Description                                                                                                                                                                                                                      |
|-------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| charge_mode | String  | <b>Definition</b><br>Indicates the billing information, which is yearly/monthly or pay-per-use.<br><b>Range</b><br>N/A                                                                                                           |
| period_num  | Integer | <b>Definition</b><br>Indicates the subscription period, which is calculated by month.<br>This parameter is valid when <b>charge_mode</b> is set to <b>prePaid</b> (creating yearly/monthly DB instances).<br><b>Range</b><br>N/A |

**Table 5-38** restore\_point field data structure description

| Parameter   | Type   | Description                                                                                                                                                                                                                               |
|-------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_id | String | <b>Definition</b><br>Specifies the source instance ID.<br><b>Range</b><br>N/A                                                                                                                                                             |
| type        | String | <b>Definition</b><br>Specifies the restoration mode.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>backup</b>: Data is restored using backups.</li> <li>• <b>timestamp</b>: Data is restored to a point in time.</li> </ul> |
| backup_id   | String | <b>Definition</b><br>Specifies the ID of the backup to be restored.<br><b>Range</b><br>N/A                                                                                                                                                |

| Parameter     | Type               | Description                                                                                                                                                                                                   |
|---------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| restore_time  | Integer            | <b>Definition</b><br>Specifies the time point of data restoration in the UNIX timestamp. The unit is millisecond and the time zone is UTC.<br><b>Range</b><br>N/A                                             |
| database_name | Map<String,String> | <b>Definition</b><br>This parameter is supported only for Microsoft SQL Server databases. If this parameter is specified, you can restore specific databases and rename new databases.<br><b>Range</b><br>N/A |

#### NOTE

The values of **region** and **availability\_zone** are used as examples.

- Example normal response

RDS for MySQL single-node instance created.

```
{
 "instance": {
 "id": "dsfae23fsfdsae3435in01",
 "name": "trove-instance-rep2",
 "datastore": {
 "type": "MySQL",
 "version": "5.7"
 },
 "flavor_ref": "rds.mysql.s1.large",
 "volume": {
 "type": "CLOUDSSD",
 "size": 100
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a",
 "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 SQL Server single-node instance created.

```
{
 "instance": {
```

```
{
 "id": "dsfae23fsfdsae3435in01",
 "name": "trove-instance-rep2",
 "datastore": {
 "type": "sqlserver",
 "version": "2014_SE"
 },
 "flavor_ref": "rds.mssql.2014.se.s3.large.2",
 "volume": {
 "type": "ULTRAHIGH",
 "size": 100
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a",
 "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"
 },
 "collation": "Cyrillic_General_CI_AS"
},
"job_id": "dff1d289-4d03-4942-8b9f-463ea07c000d"
}
```

RDS for MySQL primary/standby instance created.

```
{
 "instance": {
 "id": "dsfae23fsfdsae3435in01",
 "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": "CLOUDSSD",
 "size": 100
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a,ap-southeast-1b",
 "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 read replica created.

```
{
 "instance": {
 "id": "dsfae23fsfdsae3435in01",
 "name": "trove-instance-rep2",
 "flavor_ref": "rds.mysql.s1.large.rr",
 "volume": {
 "type": "CLOUDSSD",
 "size": 100
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a",
 "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](#).

## 5.6.2 Creating a DB Instance (API v5)

### Function

This API is derived from the API for creating a DB instance (v3). The **subscription\_agency** field is added to the request body of this API. This field is used when a RAM-based shared key is used to create a yearly/monthly RDS DB instance. This API is used to create a single-node RDS DB instance, primary/standby DB instance, or read replica.

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

This API supports only AK/SK authentication. This API allows you to set the X-Client-Token request header in the HTTP request header to ensure the request idempotence. For details, see [Idempotent Requests](#).

### URI

- URI format  
POST /v5/{project\_id}/instances
- Parameter description

**Table 5-39** Parameters

| Parameter  | Mandatory | Description                                                                                                                             |
|------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | Project ID of a tenant in a region.<br><br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request

**Table 5-40** Parameters (creating single, primary/standby, and cluster instances)

| Parameter        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name             | Yes       | String | Instance name.<br>Instances of the same type can have the same name under the same tenant. Value range: <ul style="list-style-type: none"><li>RDS for MySQL: The DB instance name must be 4 to 64 bytes long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), periods (.), and underscores (_).</li><li>RDS for PostgreSQL and RDS for SQL Server: The DB instance name must be 4 to 64 bytes long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), and underscores (_).</li></ul> |
| datastore        | Yes       | Object | Database information. This parameter is optional when you create RDS for MySQL read replicas.<br>For details, see <a href="#">Table 5-42</a> .                                                                                                                                                                                                                                                                                                                                                                                                               |
| ha               | No        | Object | HA configuration, which is used when you create primary/standby instances.<br>For details, see <a href="#">Table 5-43</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| configuration_id | No        | String | Parameter template ID.<br>For details, see <b>id</b> in <a href="#">Table 5-562 of Obtaining a Parameter Template List</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| port      | No        | String | <p>Database port.</p> <ul style="list-style-type: none"> <li>RDS for MySQL instances can use database ports 1024 to 65535, excluding 12017, 33071, and 33062, which are reserved for RDS system use.</li> <li>RDS for PostgreSQL instances can use database ports 2100 to 9500.</li> <li>For RDS for SQL Server 2022 Enterprise Edition, 2022 Standard Edition, 2022 Web Edition, 2019 Enterprise Edition, 2019 Standard Edition, 2019 Web Edition, 2017 Enterprise Edition, 2017 Standard Edition, and 2017 Web Edition, the port number can be set to 1433 or 2100 to 9500 (excluding 5050, 5353, 5355, 5985, and 5986). For other editions, the port number can be set to 1433 or 2100 to 9500 (excluding 5355, 5985, and 5986).</li> </ul> <p>If this parameter is not set, the default value is as follows:</p> <ul style="list-style-type: none"> <li>RDS for MySQL: <b>3306</b></li> <li>RDS for PostgreSQL: <b>5432</b></li> <li>RDS for SQL Server: <b>1433</b></li> </ul> |
| password  | No        | String | <p>Database password.</p> <p>Value 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>Different DB engines support different special characters.</p> <ul style="list-style-type: none"> <li>RDS for MySQL: ~!@#%&amp;^*_-=+?,()&amp;. </li> <li>RDS for SQL Server: ~!@#%&amp;^*_-=+?,</li> <li>RDS for PostgreSQL: ~!@#%&amp;^*_-=+?,</li> </ul> <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>                                                                                                                                                                                                             |

| Parameter             | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                   |
|-----------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| backup_strategy       | No        | Object | Advanced backup policy.<br>For details, see <a href="#">Table 5-44</a> .                                                                                                                                                                                                                                                      |
| enterprise_project_id | No        | String | Enterprise project ID.                                                                                                                                                                                                                                                                                                        |
| disk_encryption_id    | No        | String | Key ID for disk encryption. The default value is empty.<br><b>NOTE</b><br>Serverless instances do not support this parameter.                                                                                                                                                                                                 |
| subscription_agency   | No        | String | URN of the agency authorized to the Billing service. This parameter is required when you use a RAM-based shared key to create a yearly/monthly RDS DB instance. For details about how to obtain the agency URN, see <a href="#">Obtaining an Agency URN</a> .                                                                 |
| flavor_ref            | Yes       | String | Specification code. The value cannot be empty.<br>For details, see <b>spec_code</b> in <a href="#">Table 5-13 of Querying Database Specifications</a> .                                                                                                                                                                       |
| volume                | Yes       | Object | Volume information.<br>For details, see <a href="#">Table 5-45</a> .                                                                                                                                                                                                                                                          |
| region                | Yes       | String | Region ID.<br>The value cannot be empty. For details about how to obtain this parameter value, see <a href="#">Regions and Endpoints</a> .                                                                                                                                                                                    |
| availability_zone     | Yes       | String | AZ ID. If the DB instance is not a single-node instance, you need to specify an AZ for each node of the instance and separate the AZs with commas (,). For details, see the example.<br><br>The AZ ID can be obtained from the response returned after the API in <a href="#">Querying Database Specifications</a> is called. |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| vpc_id    | Yes       | String | <p>VPC ID. This parameter is optional when you create RDS for MySQL read replicas.</p> <p>To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> <li>Method 1: Log in to the VPC console and view the VPC ID on the VPC details page.</li> <li>Method 2: See the "Querying VPCs" section in the <i>Virtual Private Cloud API Reference</i>.</li> </ul>                                                                                              |
| subnet_id | Yes       | String | <p>Subnet ID. This parameter is optional when you create RDS for MySQL read replicas.</p> <p>To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> <li>Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page. You can view the network ID on the displayed page.</li> <li>Method 2: See the "Querying Subnets" section in the <i>Virtual Private Cloud API Reference</i>.</li> </ul>                          |
| data_vip  | No        | String | <p>Floating IP address of a DB instance. Currently, only IPv4 addresses are supported. You can use either of the following methods to obtain the floating IP address:</p> <ul style="list-style-type: none"> <li>Method 1: Log in to the VPC console and click the target subnet on the <b>Subnets</b> page. View the subnet CIDR block and select an IP address that is not in use.</li> <li>Method 2: See the "Querying Subnets" section in the <i>Virtual Private Cloud API Reference</i>.</li> </ul> |



| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| security_group_id | Yes       | String | <p>Security group which the DB instance is associated with. To obtain this parameter value, use either of the following methods: This parameter is optional when you create RDS for MySQL read replicas.</p> <p>To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> <li>Method 1: Log in to VPC console. Choose <b>Access Control</b> &gt; <b>Security Groups</b> in the navigation pane. On the displayed page, click the target security group. You can view the security group ID on the displayed page.</li> <li>Method 2: See the "Querying Security Groups" section in the <i>Virtual Private Cloud API Reference</i>.</li> </ul> |
| charge_info       | No        | Object | <p>Billing information, which is yearly/ monthly or pay-per-use (default setting). For details, see <a href="#">Table 5-46</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| time_zone         | No        | String | <p>UTC time zone.</p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the time zone of each DB engine is as follows: <ul style="list-style-type: none"> <li>MySQL uses UTC by default.</li> <li>PostgreSQL uses UTC by default.</li> <li>Microsoft SQL Server uses UTC by default.</li> </ul> </li> <li>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.</li> </ul>                                                                                                                                                           |
| dsspool_id        | No        | String | <p>DSS pool ID for DeC users. The DSS pool configured for each AZ is different. When DeC users create DB instances other than single-node instances or read replicas, DSS pool IDs must be specified for all nodes of the DB instances and must be separated by commas (,).</p>                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Parameter          | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|-----------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| replica_of_id      | No        | String           | ID of the primary DB instance. This parameter is mandatory when you create read replicas and is unavailable in other scenarios.                                                                                                                                                                                                                                                                                                                                                                                                  |
| restore_point      | No        | Object           | Restoration information. This parameter is mandatory when data is restored to a new instance.<br>For details, see <a href="#">Table 5-48</a> .                                                                                                                                                                                                                                                                                                                                                                                   |
| tags               | No        | Array of objects | Tag list. Each DB instance can be associated with tag key-value pairs while being created. <ul style="list-style-type: none"> <li>• <i>{key}</i> indicates the tag key. It must be unique and cannot be empty.</li> <li>• <i>{value}</i> indicates the tag value, which can be empty.</li> </ul> <p>If you want to create DB instances with multiple tag keys and values, separate them with commas (.). A maximum of 10 key-value pairs can be added for a DB instance.</p> <p>For details, see <a href="#">Table 5-47</a>.</p> |
| unchangeable_param | No        | Object           | List of unchangeable parameters. The unchangeable parameters need to be specified before database initialization and cannot be modified after being specified.<br>For details, see <a href="#">Table 5-50</a> .                                                                                                                                                                                                                                                                                                                  |
| collation          | No        | String           | This parameter applies only to RDS for SQL Server instances. It is invalid for RDS for MySQL, RDS for MariaDB, and RDS for PostgreSQL instances.<br>Value range: character sets queried in <a href="#">Querying the Available SQL Server Character Set</a> .                                                                                                                                                                                                                                                                     |

| Parameter       | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dry_run         | No        | Boolean | <p>Whether DB instances will not be created after the request is checked. This parameter is supported with the MySQL DB engine only.</p> <ul style="list-style-type: none"> <li>• <b>true:</b> DB instances will not be created after the request is checked. <ul style="list-style-type: none"> <li>– If the check is successful, status code 202 is returned.</li> <li>– If the check fails, an error code is returned. For details, see <a href="#">Error Codes</a>.</li> </ul> </li> <li>• <b>false:</b> DB instances will be created after the check is successful.</li> </ul> |
| count           | No        | Integer | <p>Number of DB instances to be created in a batch. Value range: 1 to 50</p> <p><b>NOTE</b></p> <p>This parameter is available only when you create an RDS for MySQL or RDS for SQL Server primary instance.</p> <p>This parameter is unavailable when you create read replicas.</p>                                                                                                                                                                                                                                                                                                |
| serverless_info | No        | Object  | <p>Resource scaling scope of a serverless instance. This parameter is mandatory when you create a serverless instance. For details, see <a href="#">Table 5-49</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                             |

**Table 5-41** Parameters

| Parameter             | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name                  | Yes       | String | Instance name.<br>Instances of the same type can have the same name under the same tenant.<br>Value range: <ul style="list-style-type: none"> <li>RDS for MySQL: The DB instance name must be 4 to 64 bytes long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), periods (.), and underscores (_).</li> <li>RDS for PostgreSQL and RDS for SQL Server: The DB instance name must be 4 to 64 bytes long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), and underscores (_).</li> </ul> |
| enterprise_project_id | No        | String | Project ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| disk_encryption_id    | No        | String | Key ID for disk encryption. The default value is empty.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| subscription_agency   | No        | String | URN of the agency authorized to the Billing service. This parameter is required when you use a RAM-based shared key to create a yearly/monthly RDS DB instance. For details about how to obtain the agency URN, see <a href="#">Obtaining an Agency URN</a> .                                                                                                                                                                                                                                                                                                      |
| replica_of_id         | No        | String | ID of the primary DB instance. This parameter is mandatory when you create read replicas and is unavailable in other scenarios.                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| flavor_ref            | Yes       | String | Specification code. The value cannot be empty.<br>For details, see <b>spec_code</b> in <a href="#">Table 5-13 of Querying Database Specifications</a> .                                                                                                                                                                                                                                                                                                                                                                                                            |
| volume                | Yes       | Object | Volume information.<br>For details, see <a href="#">Table 5-45</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| region            | No        | String | Region ID. Read replicas can be created only in the same region as that of the primary DB instance.<br>The value cannot be empty. For details about how to obtain this parameter value, see <a href="#">Regions and Endpoints</a> .                                                                                                                                                     |
| availability_zone | Yes       | String | AZ ID.<br>The AZ ID can be obtained from the response returned after the API in <a href="#">Querying Database Specifications</a> is called.                                                                                                                                                                                                                                             |
| charge_info       | No        | Object | Billing information, which is yearly/ monthly or pay-per-use (default setting).<br>For details, see <a href="#">Table 5-46</a> .<br><b>NOTE</b><br>To create RDS for MySQL or RDS for PostgreSQL read replicas billed on a yearly/ monthly basis, contact customer service to apply for the required permissions.<br>RDS for SQL Server does not support yearly/ monthly read replicas. |

**Table 5-42** Data structure description of field datastore

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

| Parameter        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| version          | Yes       | String | <p>DB engine version.</p> <ul style="list-style-type: none"> <li>MySQL: 5.7 and 8.0 are supported. Example value: 5.7</li> <li>PostgreSQL: 9.5, 9.6, 10, 11, 12, 13, 14, and 15 are supported. Example value: 9.6</li> <li>Microsoft SQL Server: Only 2022 Enterprise Edition, 2022 Standard Edition, 2022 Web Edition, 2019 Enterprise Edition, 2019 Standard Edition, 2019 Web Edition, 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 are supported. Example value: 2014_SE</li> </ul> <p>For details about supported DB engine versions, see <a href="#">Querying Version Information About a DB Engine</a>.</p> |
| complete_version | No        | String | Complete database version number.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Table 5-43** Data structure description of field ha

| Parameter | Mandatory | Type   | Description                                                               |
|-----------|-----------|--------|---------------------------------------------------------------------------|
| mode      | Yes       | String | Primary/standby instance type. The value is <b>Ha</b> (case-insensitive). |

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

**Table 5-44** Data structure description of field backup\_strategy

| 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 empty. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format.</p> <ul style="list-style-type: none"> <li>The <b>HH</b> value must be 1 greater than the <b>hh</b> value.</li> <li>The values of <b>mm</b> and <b>MM</b> must be the same and must be set to any of the following: <b>00</b>, <b>15</b>, <b>30</b>, or <b>45</b>.</li> </ul> <p>Example value:</p> <ul style="list-style-type: none"> <li>08:15-09:15</li> <li>23:00-00:00</li> </ul> |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| keep_days | No        | Integer | <p>Retention days for backups.</p> <p>The value ranges from 0 to 732. If this parameter is not specified or set to <b>0</b>, the automated backup policy is disabled. To extend the retention period, contact customer service. Automated backups can be retained for up to 2,562 days.</p> <p><b>NOTICE</b></p> <p>The automated backup policy cannot be disabled for primary/standby DB instances of RDS for SQL Server.</p> |

**Table 5-45** Data structure description of field volume

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



**Table 5-46** Data structure description of field charge\_info

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| charge_mode | Yes       | String  | Billing mode.<br>Values: <ul style="list-style-type: none"> <li>• <b>prePaid</b>: indicates the yearly/monthly billing mode.</li> <li>• <b>postPaid</b>: indicates the pay-per-use billing mode.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| period_type | No        | String  | Subscription type.<br>Values: <ul style="list-style-type: none"> <li>• <b>month</b>: indicates that the subscription unit is month.</li> <li>• <b>year</b>: indicates that the subscription unit is year.</li> </ul> <b>NOTE</b><br>This parameter is valid and mandatory if <b>charge_mode</b> is set to <b>prePaid</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| period_num  | No        | Integer | Subscription period. This parameter is valid and mandatory if <b>charge_mode</b> is set to <b>prePaid</b> .<br>Value range: <ul style="list-style-type: none"> <li>• When <b>period_type</b> is set to <b>month</b>, the parameter value ranges from <b>1</b> to <b>9</b>.</li> <li>• When <b>period_type</b> is set to <b>year</b>, the parameter value ranges from <b>1</b> to <b>3</b> or can be <b>5</b>.<br/>Only RDS for MySQL supports the 5-year subscription. The constraints are as follows: <ul style="list-style-type: none"> <li>– You need to contact customer service to apply for the required permissions.</li> <li>– This setting is supported only in CN North-Beijing4, CN East-Shanghai1, CN South-Guangzhou, and CN Southwest-Guiyang1.</li> <li>– This setting is supported only with general-purpose instances.</li> </ul> </li> </ul> |

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_auto_renew | No        | boolean | Whether automatic renewal is enabled for yearly/monthly DB instances. The renewal period is the same as the original period and the order will be automatically paid. <ul style="list-style-type: none"> <li><b>true</b>: indicates that automatic renewal is enabled.</li> <li><b>false</b>: indicates that automatic renewal is disabled. The default value is <b>false</b>.</li> </ul> |
| is_auto_pay   | No        | boolean | Whether the order will be automatically paid after yearly/monthly instances are created. This parameter does not affect the payment method of automatic renewal. <ul style="list-style-type: none"> <li><b>true</b>: The order will be automatically paid.</li> <li><b>false</b>: The order will be manually paid. The default value is <b>false</b>.</li> </ul>                          |

**Table 5-47** Data structure description of field tags

| 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 <b>sys</b> . |
| value     | Yes       | String | Tag value. It can be left blank or contain a maximum of 255 Unicode characters.<br>It can contain letters, digits, spaces, and special characters <code>_.:=-@</code> , but cannot start or end with a space.     |

**Table 5-48** Data structure description of field `restore_point`

| Parameter                  | Mandatory | Type               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------|-----------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>instance_id</code>   | Yes       | String             | Source instance ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <code>type</code>          | Yes       | String             | Restoration mode. Enumerated values include: <ul style="list-style-type: none"> <li>• <b>backup</b>: indicates using backup files for restoration. In this mode, <b>type</b> is optional and <b>backup_id</b> is mandatory.</li> <li>• <b>timestamp</b>: indicates the point-in-time restoration. In this mode, <b>type</b> is mandatory and <b>restore_time</b> is mandatory.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <code>backup_id</code>     | No        | String             | ID of the backup used to restore data. This parameter must be specified when backups are used for restoration.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <code>restore_time</code>  | No        | Integer            | Time point of data restoration in the UNIX timestamp format. The unit is millisecond and the time zone is UTC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <code>database_name</code> | No        | Map<String,String> | This parameter is supported only for Microsoft SQL Server instances. If this parameter is specified, you can restore specific databases and rename new databases. <ul style="list-style-type: none"> <li>• The new database names must be different from the original database names. If you do not customize the database names, data will be restored to the original databases by default. If this parameter is not specified, all databases are restored by default. Example value: "database_name": {"<i>Original database name</i>": "<i>New database name</i>"}</li> <li>• New database names cannot contain the following fields (case-insensitive): rdsadmin, master, msdb, tempdb, model, and resource.</li> <li>• Each database name must consist of 1 to 64 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed.</li> </ul> |

**Table 5-49** Data structure description of field `serverless_info`

| Parameter            | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                   |
|----------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>min_cap</code> | Yes       | String | Minimum compute power of a serverless instance, in RCU. The value ranges from 0.5 to 8 and the step is 0.5.<br><b>NOTE</b><br>RCU: RDS Capacity Unit. It is the billing unit for serverless instances.<br>The value of <b><code>max_cap</code></b> must be greater than that of <b><code>min_cap</code></b> . |
| <code>max_cap</code> | Yes       | String | Maximum compute power of a serverless instance, in RCU. The value ranges from 0.5 to 8 and the step is 0.5.                                                                                                                                                                                                   |

**Table 5-50** Data structure description of field `unchangeable_param`

| Parameter                           | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>lower_case_table_names</code> | No        | String | Whether table names are case sensitive. The default value is <b>1</b> .<br>Values: <ul style="list-style-type: none"><li>• <b>0</b>: Table names are fixed and case sensitive.</li><li>• <b>1</b>: Table names are stored in lowercase and are case insensitive.</li></ul> <b>NOTE</b><br>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. |

 **NOTE**

The values of **`region`** and **`availability_zone`** in the example request are only for reference.

- URI example  
POST `https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances`
- Example request  
Create an RDS for MySQL single-node instance billed on a yearly/monthly basis using a RAM-based shared key.

```
{
 "name": "rds-instance-rep2",
```

```

"datastore": {
 "type": "MySQL",
 "version": "5.7"
},
"flavor_ref": "rds.mysql.s1.large",
"volume": {
 "type": "ULTRAHIGH",
 "size": 100
},
"disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
"subscription_agency": "xxx::xxxx:xx:xxxx",
"region": "ap-southeast-1",
"availability_zone": "ap-southeast-1a",
"vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
"subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
"data_vip": "192.168.0.147",
"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": "prePaid",
 "period_type": "year",
 "period_num": 1
},
"password": "Test@12345678",
"configuration_id": "452408-ef4b-44c5-94be-305145fg",
"enterprise_project_id": "fdsa-3rds",
"time_zone": "UTC+04:00",
"tags": [
 {
 "key": "key1",
 "value": "value1"
 },
 {
 "key": "key2",
 "value": "value2"
 }
],
"dry_run": false,
"count": 12
}

```

Create an RDS for PostgreSQL single-node instance billed on a yearly/monthly basis using a RAM-based shared key.

```

{
 "name": "rds-instance-rep2",
 "datastore": {
 "type": "PostgreSQL",
 "version": "10"
 },
 "flavor_ref": "rds.pg.s1.large",
 "volume": {
 "type": "ULTRAHIGH",
 "size": 100
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "subscription_agency": "xxx::xxxx:xx:xxxx",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a",
 "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
 "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
 "data_vip": "192.168.0.147",
 "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": "prePaid",
 "period_type": "year",
 "period_num": 1
 },
 "password": "Test@12345678",
 "configuration_id": "452408-ef4b-44c5-94be-305145fg",
 "enterprise_project_id": "fdsa-3rds",
 "time_zone": "UTC+04:00",
 "tags": [
 {
 "key": "key1",
 "value": "value1"
 },
 {
 "key": "key2",
 "value": "value2"
 }
]
}

```

Create an RDS for SQL Server single-node instance billed on a yearly/monthly basis using a RAM-based shared key.

```

{
 "name": "rds-instance-rep2",
 "datastore": {
 "type": "SQLServer",
 "version": "2014_SE"
 },
 "flavor_ref": "rds.mssql.se.m3.large.8",
 "volume": {
 "type": "ULTRAHIGH",
 "size": 100
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "subscription_agency": "xxx::xxxx:xx:xxxx",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a",
 "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
 "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
 "data_vip": "192.168.0.147",
 "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": "prePaid",
 "period_type": "year",
 "period_num": 1
 },
 "collation": "Cyrillic_General_CI_AS",
 "password": "Test@12345678",
 "configuration_id": "452408-ef4b-44c5-94be-305145fg",
 "enterprise_project_id": "fdsa-3rds",
 "time_zone": "UTC+04:00",
 "tags": [
 {
 "key": "key1",
 "value": "value1"
 },
 {
 "key": "key2",
 "value": "value2"
 }
]
}

```

```
]
}
```

Create an RDS for MySQL primary/standby instance billed on a yearly/monthly basis using a RAM-based shared key.

```
{
 "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
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "subscription_agency": "xxx::xxxxx:xx:xxxx",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a,ap-southeast-1b",
 "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
 "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
 "data_vip": "192.168.0.147",
 "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": "prePaid",
 "period_type": "year",
 "period_num": 1
 },
 "password": "Test@12345678",
 "configuration_id": "452408-ef4b-44c5-94be-305145fg",
 "enterprise_project_id": "fdsa-3rds",
 "time_zone": "UTC+04:00",
 "tags": [
 {
 "key": "key1",
 "value": "value1"
 },
 {
 "key": "key2",
 "value": "value2"
 }
],
 "dry_run": false,
 "count": 12
}
```

Create an RDS for MySQL read replica billed on a yearly/monthly basis using a RAM-based shared key.

```
{
 "name": "rds-instance-rep2",
 "replica_of_id": "afdsad-fds-fdsagin01",
 "flavor_ref": "rds.mysql.s1.large.rr",
 "volume": {
 "type": "ULTRAHIGH"
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "subscription_agency": "xxx::xxxxx:xx:xxxx",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a",

```

```
{
 "charge_info": {
 "charge_mode": "prePaid",
 "period_type": "year",
 "period_num": 1
 },
 "enterprise_project_id": "fdsa-3rds",
 "tags": [
 {
 "key": "key1",
 "value": "value1"
 },
 {
 "key": "key2",
 "value": "value2"
 }
]
}
```

## Response

- Normal response

**Table 5-51** Parameters

| Parameter | Type   | Description                                                                                                                                                                                                                                  |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance  | Object | Instance information.<br>For details, see <a href="#">Table 5-52</a> .                                                                                                                                                                       |
| job_id    | String | ID of the instance creation task.<br>For details about how to query task details, see <a href="#">Obtaining Information About a Task with a Specified ID</a> .<br>This parameter is returned only for the creation of pay-per-use instances. |
| order_id  | String | Order ID. This parameter is returned only for the creation of yearly/monthly instances.                                                                                                                                                      |

**Table 5-52** instance description

| Parameter | Type   | Description                                                                                                                                                                               |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | Instance ID. If instances are created in batches, multiple instance IDs separated by commas (,) are returned for the MySQL DB engine. For other DB engines, this parameter is left blank. |
| name      | String | Instance name. Instances of the same type can have the same name under the same tenant.                                                                                                   |



| Parameter             | Type   | Description                                                                                                                                                                |
|-----------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status                | String | Instance status. For example, <b>BUILD</b> indicates that the instance is being created.<br><br>This parameter is returned only for the creation of pay-per-use instances. |
| datastore             | Object | Database information.<br>For details, see <a href="#">Table 5-53</a> .                                                                                                     |
| ha                    | Object | HA configurations. This parameter is returned only when primary/standby instances are created.<br>For details, see <a href="#">Table 5-54</a> .                            |
| configuration_id      | String | Parameter template ID. This parameter is returned only when a custom parameter template is used during instance creation.                                                  |
| port                  | String | Database port, which is the same as the request parameter.                                                                                                                 |
| backup_strategy       | Object | Automated backup policy.<br>For details, see <a href="#">Table 5-55</a> .                                                                                                  |
| enterprise_project_id | String | Project ID.                                                                                                                                                                |
| disk_encryption_id    | String | Key ID for disk encryption. This parameter is returned only when it is specified during the instance creation. By default, it is empty.                                    |
| flavor_ref            | String | Specification code. The value cannot be empty.<br>For details, see <b>spec_code</b> in <a href="#">Table 5-13 of Querying Database Specifications</a> .                    |
| volume                | Object | Volume information.<br>For details, see <a href="#">Table 5-56</a> .                                                                                                       |
| region                | String | Region ID.                                                                                                                                                                 |
| availability_zone     | String | AZ ID.                                                                                                                                                                     |
| vpc_id                | String | VPC ID.                                                                                                                                                                    |
| subnet_id             | String | Subnet ID.                                                                                                                                                                 |

| Parameter         | Type   | Description                                                                                                                                    |
|-------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------|
| security_group_id | String | Security group which the DB instance is associated with. To obtain this parameter value, use either of the following methods:                  |
| charge_info       | Object | Billing information, which is yearly/ monthly or pay-per-use.<br>For details, see <a href="#">Table 5-57</a> .                                 |
| collation         | String | Collation for the RDS for SQL Server instance.                                                                                                 |
| restore_point     | Object | Restoration information. This parameter is mandatory when data is restored to a new instance.<br>For details, see <a href="#">Table 5-58</a> . |

**Table 5-53** Data structure description of field datastore

| Parameter        | Type   | Description                                                                                                                                |
|------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------|
| type             | String | DB engine. Value: <ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>SQLServer</li> </ul>                           |
| version          | String | DB engine version.<br>For details about supported DB engine versions, see <a href="#">Querying Version Information About a DB Engine</a> . |
| complete_version | String | Complete database version number.                                                                                                          |

**Table 5-54** Data structure description of field ha

| Parameter | Type   | Description                                             |
|-----------|--------|---------------------------------------------------------|
| mode      | String | Primary/standby instance type. The value is <b>Ha</b> . |

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

**Table 5-55** Data structure description of field backupStrategy

| 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 empty. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format.</p> <ul style="list-style-type: none"> <li>The <b>HH</b> value must be 1 greater than the <b>hh</b> value.</li> <li>The values of <b>mm</b> and <b>MM</b> must be the same and must be set to any of the following: <b>00</b>, <b>15</b>, <b>30</b>, or <b>45</b>.</li> </ul> <p>Example value:</p> <ul style="list-style-type: none"> <li>08:15-09:15</li> <li>23:00-00:00</li> </ul> <p>If <b>backup_strategy</b> in the request body is empty, <b>02:00-03:00</b> is returned for <b>start_time</b> by default.</p> |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| keep_days | Integer | Retention days for backups.<br>The value ranges from 0 to 732. If this parameter is not specified or set to <b>0</b> , the automated backup policy is disabled. To extend the retention period, contact customer service. Automated backups can be retained for up to 2,562 days.<br>If <b>backup_strategy</b> in the request body is empty, <b>7</b> is returned for <b>keep_days</b> by default. |

**Table 5-56** Data structure description of field volume

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

**Table 5-57** Data structure description of field chargeInfo

| Parameter   | Type   | Description                                                                                                                                                                         |
|-------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| charge_mode | String | Billing information, which is yearly/monthly or pay-per-use.                                                                                                                        |
| period_type | String | Subscription type. <ul style="list-style-type: none"> <li>• <b>month</b>: The service is subscribed by month.</li> <li>• <b>year</b>: The service is subscribed by year.</li> </ul> |

| Parameter     | Type    | Description                                                                                                                                                                                                                                                                                                                                                          |
|---------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_num    | Integer | Subscription period, which is calculated by month.<br>This parameter is valid only when <b>charge_mode</b> is set to <b>prePaid</b> (yearly/monthly billing).                                                                                                                                                                                                        |
| is_auto_pay   | Boolean | Whether the order will be automatically paid after yearly/monthly instances are created. This parameter does not affect the payment method of automatic renewal. <ul style="list-style-type: none"> <li>• <b>false</b>: The order will be manually paid. The default value is <b>false</b>.</li> <li>• <b>true</b>: The order will be automatically paid.</li> </ul> |
| is_auto_renew | Boolean | Whether automatic renewal is enabled for yearly/monthly instances. The renewal period is the same as the original period, and the order will be automatically paid. <ul style="list-style-type: none"> <li>• <b>false</b>: Automatic renewal is disabled. The default value is <b>false</b>.</li> <li>• <b>true</b>: Automatic renewal is enabled.</li> </ul>        |

**Table 5-58** Data structure description of field `restore_point`

| Parameter    | Type    | Description                                                                                                                                                                                              |
|--------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_id  | String  | Source instance ID.                                                                                                                                                                                      |
| type         | String  | Restoration mode. <ul style="list-style-type: none"> <li>• <b>backup</b>: indicates using backup files for restoration.</li> <li>• <b>timestamp</b>: indicates the point-in-time restoration.</li> </ul> |
| backup_id    | String  | ID of the backup used to restore data.                                                                                                                                                                   |
| restore_time | Integer | Time point of data restoration in the UNIX timestamp format. The unit is millisecond and the time zone is UTC.                                                                                           |

| Parameter     | Type               | Description                                                                                                                                                       |
|---------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database_name | Map<String,String> | This parameter is supported only for Microsoft SQL Server instances. If this parameter is specified, you can restore specific databases and rename new databases. |

 NOTE

The values of **region** and **availability\_zone** in the example response are only for reference.

- 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
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a",
 "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": "prePaid",
 "period_type": "year",
 "period_num": 1
 },
 "job_id": "dff1d289-4d03-4942-8b9f-463ea07c000d"
 }
}
```

RDS for SQL Server single instance created.

```
{
 "instance": {
 "id": "dsfae23fsfdsae3435in01",
 "name": "trove-instance-rep2",
 "datastore": {
 "type": "sqlserver",
 "version": "2014_SE"
 },
 "flavor_ref": "rds.mssql.2014.se.s3.large.2",
 "volume": {
 "type": "ULTRAHIGH",
 "size": 100
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "region": "ap-southeast-1",
 }
}
```

```

 "availability_zone": "ap-southeast-1a",
 "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": "prePaid",
 "period_type": "year",
 "period_num": 1
 },
 "collation": "Cyrillic_General_CI_AS"
 },
 "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
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a,ap-southeast-1b",
 "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": "prePaid",
 "period_type": "year",
 "period_num": 1
 }
 },
 "job_id": "dff1d289-4d03-4942-8b9f-463ea07c000d"
}

```

RDS for MySQL read replica created.

```

{
 "instance": {
 "id": "dsfae23fsfsdae3435in01",
 "name": "trove-instance-rep2",
 "flavor_ref": "rds.mysql.s1.large.rr",
 "volume": {
 "type": "ULTRAHIGH",
 "size": 100
 },
 "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",

```

```
{
 "region": "ap-southeast-1",
 "availability_zone": "ap-southeast-1a",
 "charge_info": {
 "charge_mode": "prePaid",
 "period_type": "year",
 "period_num": 1
 },
 "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](#).

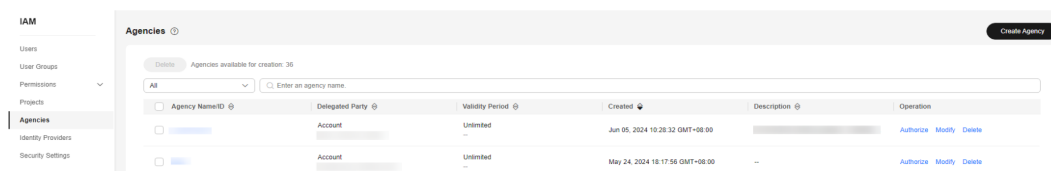
## Error Code

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

## Obtaining an Agency URN

1. Log in to the Identity and Access Management (IAM) console.

Figure 5-1 IAM page



2. Click **Agencies**. On the displayed page, click **Create Agency**.
3. On the **Create Agency** page, set the following parameters and click **Next**.
  - **Agency Name**: For example, enter **agency\_billing**.
  - **Agency Type**: Select **Cloud service**.
  - **Cloud Service**: Select **Billing**.
  - **Validity Period**: Select **Unlimited**.
  - **Description**: Enter a description about the agency.



**Figure 5-2** Creating an agency

Agencies / Create Agency

★ Agency Name

★ Agency Type   
☐ Account   
Delegate another Huawei Cloud account to perform operations on your resources.   
☒ Cloud service   
Delegate a cloud service to access your resources in other cloud services.

★ Cloud Service

★ Validity Period

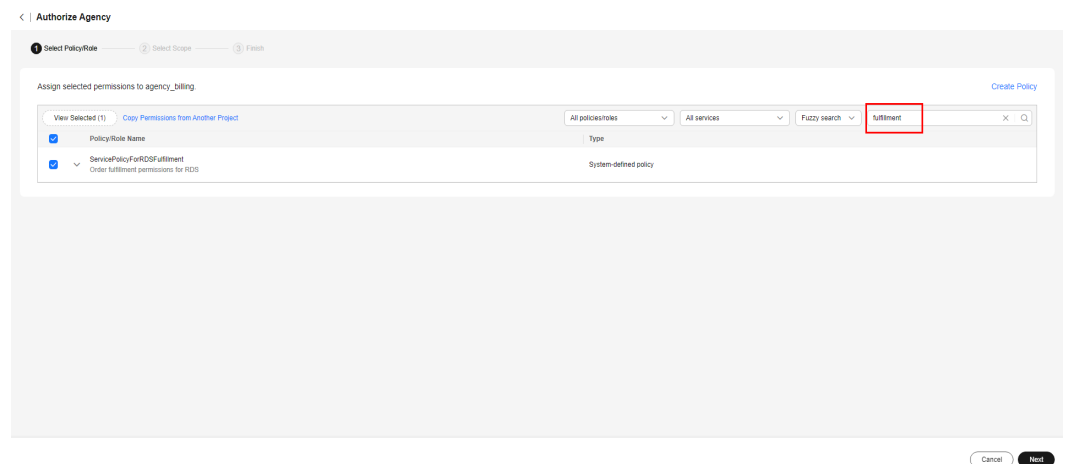
Description  0/255

4. Enter **fulfillment** in the search box to start a search, select **ServicePolicyForRDSFulfillment**, and click **Next**.

**NOTE**

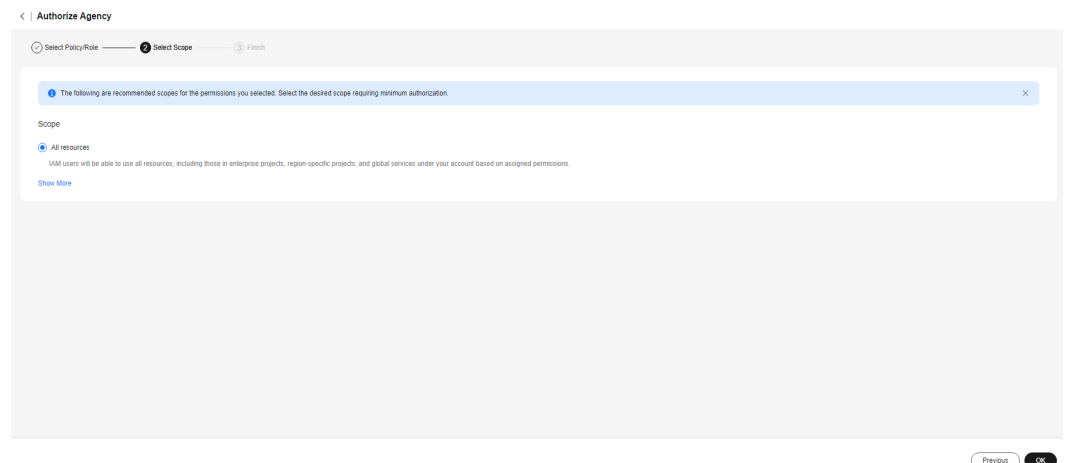
When using a RAM-based KMS shared key to create a yearly/monthly RDS instance, you must grant the Billing service the permission to operate resources in your account and the ServicePolicyForRDSFulfillment permission. After the authorization is successful, the Billing service obtains the KMS key to create encrypted disks.

**Figure 5-3** Selecting a policy



- By default, the permissions apply to all resources. Click **OK**.

**Figure 5-4** Selecting a scope



- Click the name of the created agency. On the **Basic Information** page, obtain the agency URN.

**Figure 5-5** Obtaining a URN

The screenshot shows a web interface for managing agencies. The breadcrumb is 'Agencies / agency\_billing'. There are two tabs: 'Basic Information' (selected) and 'Permissions'. Under 'Basic Information', there is a form with the following fields:

- Agency Name:** agency\_billing
- URN:** This field is highlighted with a red rectangular box.
- ★ Agency Type:** Cloud service
- ★ Cloud Service:** Billing (dropdown menu)
- ★ Validity Period:** Unlimited (dropdown menu)
- Description:** Enter a brief description. (text area with a character count of 0/255)

At the bottom of the form are two buttons: 'OK' and 'Cancel'.

### 5.6.3 Changing the Billing Mode from Pay-per-Use to Yearly/Monthly

#### Function

This API is used to change the billing mode of an RDS instance from pay-per-use to yearly/monthly.

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

#### Constraints

This API is available only for RDS for PostgreSQL instances.

#### URI

- URI format  
POST /v3/{project\_id}/instances/{instance\_id}/to-period
- Parameter description

**Table 5-59** Parameters

| Parameter   | Mandatory | Description                                                                                                                                                                                                           |
|-------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | <b>Definition</b><br>Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A      |
| instance_id | Yes       | <b>Definition</b><br>Instance ID.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>You can obtain the value of this parameter from the <b>id</b> field in <a href="#">Table 5-116</a> .<br><b>Default Value</b><br>N/A |

## Request

- Parameter description

**Table 5-60** Parameters

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                        |
|-------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_type | Yes       | String | <b>Definition</b><br>The unit of time.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li><b>MONTH</b>: months</li> <li><b>YEAR</b>: years</li> </ul> <b>Default Value</b><br>N/A |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_num        | Yes       | int    | <b>Definition</b><br>The number of periods.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li>When <b>period_type</b> is set to <b>MONTH</b>, this value can be an integer ranging from 1 to 9.</li> <li>When <b>period_type</b> is set to <b>YEAR</b>, this value can be an integer ranging from 1 to 3.</li> </ul> <b>Default Value</b><br>N/A |
| auto_pay_policy   | No        | String | <b>Definition</b><br>Whether to enable automatic payment.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li><b>YES</b>: automatic payment</li> <li><b>NO</b> (default): manual payment</li> </ul> <b>Default Value</b><br>NO                                                                                                                     |
| auto_renew_policy | No        | String | <b>Definition</b><br>Whether to automatically renew the subscription upon expiration.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li><b>YES</b>: Auto renewal is enabled.</li> <li><b>NO</b> (default): Auto renewal is disabled.</li> </ul> <b>Default Value</b><br>NO                                                                       |

- URI example  
 POST <https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/49b9dd1d6f464ba4bc91df5cbd2e52eb03/to-period>

- Request example

Change the billing mode of an RDS instance from pay-per-use to yearly/monthly.

```
{
 "period_type": "MONTH",
 "period_num": 6,
 "auto_pay_policy": "NO",
 "auto_renew_policy": "NO"
}
```

## Response

- Normal response

**Table 5-61** Parameters

| Parameter | Type   | Description                                                                                                  |
|-----------|--------|--------------------------------------------------------------------------------------------------------------|
| order_id  | String | <b>Definition</b><br>ID of the order for changing the billing mode to yearly/monthly.<br><b>Range</b><br>N/A |

- Example normal response

```
{
 "order_id": "CS2408170728W40QZ"
}
```

- 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 Stopping an Instance

### Function

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

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

## Constraints

- Only ultra-high I/O, cloud SSD, and extreme SSD pay-per-use instances can be stopped. RDS instances in a DCC cannot be stopped.
- 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. In CN East-Shanghai1, both the primary instance and read replicas can be stopped for up to 15 days. In other regions, they can be stopped for up to 7 days.
  - In CN East-Shanghai1, if you do not manually start your instance 15 days after the instance is stopped, your instance will start during the next maintenance window.
  - In other regions, if you do not manually start your instance 7 days after the instance is stopped, your instance will start during the next maintenance window.
- After an instance is stopped, the ECS is no longer billed. Other resources, including EIPs, storage resources, and backups, are still billed.
- A stopped pay-per-use DB instance may fail to be started due to insufficient resources. In this case, contact customer service.
- 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 5-62** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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 5-63** Parameters

| Parameter | 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](#).

## 5.6.5 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 this API, learn how to [authenticate](#) it.
- 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.
- A stopped pay-per-use DB instance may fail to be started due to insufficient resources. In this case, contact customer service.



## URI

- URI format  
POST /v3/{project\_id}/instances/{instance\_id}/action/startup
- Parameter description

**Table 5-64** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Instance ID.                                                                                             |

## Request

None

## Example Request

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

## Response

- Normal response

**Table 5-65** Parameters

| Parameter | 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](#).

## 5.6.6 Changing a DB Instance Name

### Function

This API is used to change a DB instance name.

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

### URI

- URI format  
PUT /v3/{project\_id}/instances/{instance\_id}/name
- Parameter description

**Table 5-66** Parameter description

| Name        | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

## Request

**Table 5-67** Parameter description

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

## 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](#).

## 5.6.7 Changing the Description of a DB Instance

### Function

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

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

### URI

- URI format  
PUT /v3/{project\_id}/instances/{instance\_id}/alias
- Parameter description

**Table 5-68** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

### Request

**Table 5-69** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| alias     | No        | String | The value consists of 0 to 64 characters, including letters, digits, periods (.), underscores (_), and hyphens (-).<br><br>If this parameter is not specified or is set to null, the original description of the instance will be deleted. |

## Example Request

Change the description of a DB instance.

```
PUT https://{endpoint}/v3/054ea741f700d4a32f1bc00f5c80dd4c/instances/5b409baece064984a1b3eef6addae50cin01/alias
{
 "alias": "alias-test"
}
```

## Response

- Normal response

**Table 5-70** Parameters

| Parameter | Type   | Description                                              |
|-----------|--------|----------------------------------------------------------|
| resp      | String | Returns <b>successful</b> if the invoking is successful. |

- 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](#).

## 5.6.8 Applying for a Private Domain Name

### Function

This API is used to bind a private domain name to a specified DB instance.

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

### Constraints

This API supports PostgreSQL only.

## URI

- URI format  
POST /v3/{project\_id}/instances/{instance\_id}/create-dns
- Parameter description

**Table 5-71** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

## Request

**Table 5-72** Parameters

| Parameter | Mandatory | Type   | Description                                                                     |
|-----------|-----------|--------|---------------------------------------------------------------------------------|
| dns_type  | Yes       | String | Specifies the domain name type.<br>Currently, only <b>private</b> is supported. |

## Example Request

Apply for a private domain name.

```
POST https://{endpoint}/v3/054ea741f700d4a32f1bc00f5c80dd4c/instances/
5b409baece064984a1b3eef6addae50cin01/create-dns

{
 "dns_type": "private"
}
```

## Response

- Normal response

**Table 5-73** Parameters

| Parameter | Type   | Description                                                          |
|-----------|--------|----------------------------------------------------------------------|
| job_id    | String | Indicates the ID of the task for applying for a private domain name. |

- Normal response

```
{ "job_id": "b9e057a0-f0fb-4987-9d21-f3a7550b32e7"}
```
- 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 Modifying a Private Domain Name

### Function

This API is used to modify a private domain name.

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

### Constraints

This API is available to RDS for MySQL and RDS for PostgreSQL only.

### URI

- URI format  
PUT /v3/{project\_id}/instances/{instance\_id}/modify-dns
- Parameter description

**Table 5-74** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

## Request

**Table 5-75** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                   |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dns_name  | Yes       | String | Specifies the prefix of the new domain name.<br><br>The value contains 8 to 64 characters. Only uppercase letters, lowercase letters, and digits are allowed. |

## Example Request

Modify the private domain name of a DB Instance.

```
PUT https://{endpoint}/v3/054ea741f700d4a32f1bc00f5c80dd4c/instances/5b409baece064984a1b3eef6addae50cin01/modify-dns
{
 "dns_name": "testModifyDnsNewName"
}
```

## Response

- Normal response

**Table 5-76** Parameters

| Parameter | Type   | Description                                                       |
|-----------|--------|-------------------------------------------------------------------|
| job_id    | String | Indicates the ID of the task for modifying a private domain name. |

- Normal response

```
{
 "job_id": "b9e057a0-f0fb-4987-9d21-f3a7550b32e7"
}
```

- 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 Querying the Domain Name of a DB Instance

### Function

This API is used to query the domain name of a DB instance.

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

### Constraints

This API is available only for RDS for PostgreSQL.

### URI

- URI format  
GET /v3/{project\_id}/instances/{instance\_id}/dns
- Parameter description

**Table 5-77** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Instance ID.                                                                                             |
| dns_type    | Yes       | Domain type. Only private domains are supported.                                                         |

### Request

- Parameter description  
None
- URI example  
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/c90928717dc747e2a20099894a87c468in01/dns?dns\_type=private

### Response

- Normal response

**Table 5-78** Parameters

| Parameter    | Type   | Description                                           |
|--------------|--------|-------------------------------------------------------|
| instance_id  | String | Instance ID.                                          |
| dns_name     | String | Domain name of the instance.                          |
| dns_type     | String | Domain type. Value: <b>private</b> .                  |
| ipv4_address | String | Virtual IP address bound to the instance domain name. |
| status       | String | Domain status.                                        |

- Example normal response

```
{
 "instance_id": "2de6315e7197418fbf2fdaed59d65da1in03",
 "dns_name": "2de6315e7197418fbf2fdaed59d65da1in03.internal.cn-xianhz-1.mysql.rds-dev.myhuaweicloud.com",
 "dns_type": "private",
 "ipv4_address": "192.168.6.105",
 "status": "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](#).

## 5.6.11 Querying the IPv6 Domain Name of a DB Instance

### Function

This API is used to query the IPv6 domain name of a DB instance.

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

### Constraints

This API is available only for RDS for PostgreSQL.

## URI

- URI format  
GET /v3/{project\_id}/instances/{instance\_id}/dns-ipv6
- Parameter description

**Table 5-79** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Instance ID.                                                                                             |
| dns_type    | Yes       | Domain type.                                                                                             |

## Request

- Parameter description  
None
- URI example  
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/c90928717dc747e2a20099894a87c468in01/dns-ipv6?dns\_type=private

## Response

- Normal response

**Table 5-80** Parameters

| Parameter    | Type   | Description                                           |
|--------------|--------|-------------------------------------------------------|
| instance_id  | String | Instance ID.                                          |
| dns_name     | String | Domain name of the instance.                          |
| dns_type     | String | Domain type. Value: <b>private</b>                    |
| ipv6_address | String | Virtual IP address bound to the instance domain name. |
| status       | String | Domain status.                                        |

- Example normal response

```
{
 "instance_id": "2de6315e7197418fbf2fdaed59d65da1in03",
 "dns_name": "2de6315e7197418fbf2fdaed59d65da1in03.ipv6.internal.***.mysql.rds-
```

```
dev.myhuaweicloud.com",
 "dns_type": "private",
 "ipv6_address": "2001:db8:a583:3:2312:c71d:6e71:c952",
 "status": "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](#).

## 5.6.12 Obtaining the Replication Status of a DB Instance

### Function

This API is used to obtain the primary/standby replication status of a DB instance.

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

### Constraints

This API is available only to RDS for MySQL and RDS for SQL Server.

### URI

- URI format  
GET /v3/{project\_id}/instances/{instance\_id}/replication/status
- Parameter description

**Table 5-81** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Instance ID.                                                                                             |

## Request

- Parameter description  
None
- URI example  
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/c90928717dc747e2a20099894a87c468in01/replication/status

## Response

- Normal response

**Table 5-82** Parameters

| Parameter          | Type   | Description                                                                                 |
|--------------------|--------|---------------------------------------------------------------------------------------------|
| replication_status | String | Replication status: <ul style="list-style-type: none"><li>normal</li><li>abnormal</li></ul> |
| abnormal_reason    | String | Reasons why the replication is abnormal.                                                    |

- Example normal response

```
{ "replication_status": "normal", "abnormal_reason": ""}
```
- 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 Querying Available Instance Classes for a DB Instance

### Function

This API is used to query available instance classes for a DB instance.

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

## Constraints

This API is available to RDS for MySQL and RDS for PostgreSQL only.

## URI

- URI format  
GET /v3/{project\_id}/instances/{instance\_id}/flavors-resize
- Parameter description

**Table 5-83** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Instance ID.                                                                                             |

## Request

None

## Example Request

Query available instance classes for a DB instance.

```
GET https://{Endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/
d674b54d5e0241c49eeb50c82ef3efe0in03/flavors-resize
```

## Response

**Table 5-84** Response body parameters

| Parameter     | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| flavor_groups | Array of objects | List of available instance classes. For details, see <a href="#">Table 5-85</a> . <ul style="list-style-type: none"><li>• <b>normal</b>: general-enhanced</li><li>• <b>normal2</b>: general-enhanced II</li><li>• <b>armFlavors</b>: Kunpeng general-enhanced</li><li>• <b>dediccateNormal (dedicatedNormalLocalssd)</b>: exclusive x86</li><li>• <b>armLocalssd</b>: standard Kunpeng</li><li>• <b>normalLocalssd</b>: standard x86</li><li>• <b>general</b>: general-purpose</li><li>• <b>dedicated</b>: dedicated</li></ul> |

**Table 5-85** Data structure description of field flavor\_groups

| Parameter       | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| group_type      | String           | Instance class. Its value can be any of the following:<br><b>normal</b> : general-enhanced <b>normal2</b> : general-enhanced II <b>armFlavors</b> : Kunpeng general-enhanced <b>dedicateNormal</b> ( <b>dedicatedNormalLocalssd</b> ): exclusive x86 <b>armLocalssd</b> : standard Kunpeng <b>normalLocalssd</b> : standard x86 <b>general</b> : general-purpose <b>dedicated</b> : dedicated |
| compute_flavors | Array of objects | List of compute specifications. For details, see <a href="#">Table 5-86</a> .                                                                                                                                                                                                                                                                                                                 |

**Table 5-86** Data structure description of field compute\_flavors

| Parameter | Type               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String             | Specification ID, which is unique.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| code      | String             | Resource specification code. Example: <b>rds.pg.m1.xlarge.rr</b><br>For more specifications, see <a href="#">Querying Database Specifications</a> . <ul style="list-style-type: none"><li>• <b>rds</b>: indicates the RDS product.</li><li>• <b>pg</b>: indicates the DB engine.</li><li>• <b>m1.xlarge</b>: indicates the high memory specifications.</li><li>• <b>rr</b>: indicates read replicas (<b>.ha</b> indicates primary/standby DB instances).</li></ul> |
| vcpus     | String             | Number of vCPUs. For example, the value <b>1</b> indicates one vCPU.                                                                                                                                                                                                                                                                                                                                                                                               |
| ram       | String             | Memory size in GB.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| az_status | Map<String,String> | Status of the specification in the AZ. The value can be any of the following: <ul style="list-style-type: none"><li>• <b>normal</b>: The specification is available in the AZ.</li><li>• <b>unsupported</b>: The specification is not supported.</li><li>• <b>sellout</b>: The specification is sold out.</li></ul>                                                                                                                                                |

- Example normal response

```
{
 "flavor_groups": [{
```

```

"group_type" : "general",
"compute_flavors" : [{
 "id" : "400fd0df-0502-34f1-99be-ccf2a04241ae",
 "code" : "rds.pg.n1.medium.2",
 "vcpus" : "1",
 "ram" : "2",
 "az_status" : {
 "cn-southwest-244b" : "normal"
 }
}, {
 "id" : "b7adc282-7efb-37d3-9e34-afb8279b5436",
 "code" : "rds.pg.n1.large.2",
 "vcpus" : "2",
 "ram" : "4",
 "az_status" : {
 "cn-southwest-244b" : "normal"
 }
}, {
 "id" : "42a4a62c-5fa8-3cd8-9856-51ebcca6e2a8",
 "code" : "rds.pg.n1.large.4",
 "vcpus" : "2",
 "ram" : "8",
 "az_status" : {
 "cn-southwest-244b" : "normal"
 }
}, {
 "id" : "9cbf4c9f-413b-3d07-bd4c-3b9432c0e662",
 "code" : "rds.pg.n1.xlarge.2",
 "vcpus" : "4",
 "ram" : "8",
 "az_status" : {
 "cn-southwest-244b" : "normal"
 }
}, {
 "id" : "4937f920-ba42-37a8-a375-ab46ef030814",
 "code" : "rds.pg.n1.xlarge.4",
 "vcpus" : "4",
 "ram" : "16",
 "az_status" : {
 "cn-southwest-244b" : "normal"
 }
}, {
 "id" : "32a8aa95-72cc-34c7-873b-827e23f3ccec",
 "code" : "rds.pg.n1.2xlarge.2",
 "vcpus" : "8",
 "ram" : "16",
 "az_status" : {
 "cn-southwest-244b" : "normal"
 }
}, {
 "id" : "98c033ca-a0f2-34be-8b27-c5dda5e6bee1",
 "code" : "rds.pg.n1.2xlarge.4",
 "vcpus" : "8",
 "ram" : "32",
 "az_status" : {
 "cn-southwest-244b" : "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](#).

## 5.6.14 Changing DB Instance Specifications

### Function

This API is used to change DB instance specifications.

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

### Constraints

- Services will be interrupted for 5 to 10 minutes when you change DB instance specifications. Exercise caution when performing this operation.
- 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 5-87** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

Request

Table 5-88 Parameters

| Parameter     | Mandatory | Type   | Description                                   |
|---------------|-----------|--------|-----------------------------------------------|
| resize_flavor | Yes       | Object | For details, see <a href="#">Table 5-89</a> . |

Table 5-89 resize\_flavor field data structure description

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

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                               |
|-------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_auto_pay | No        | Boolean | <p>Specifies whether the order will be automatically paid when the specifications of yearly/monthly DB instances are changed.</p> <ul style="list-style-type: none"> <li>• <b>true</b>: indicates the order will be automatically paid.</li> <li>• <b>false</b>: indicates the order will be manually paid. The default value is <b>false</b>.</li> </ul> |

## 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",
 "is_auto_pay": true
 }
}
```

- 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",
 "is_auto_pay": true
 }
}
```

- 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",
 "is_auto_pay": true
 }
}
```

## Response

- **Pay-per-use**
  - Normal response

**Table 5-90** Parameters

| Parameter | Type   | Description           |
|-----------|--------|-----------------------|
| job_id    | String | Indicates the job ID. |

- Example normal response

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

- **Yearly/Monthly**
  - Normal response

**Table 5-91** Parameters

| Parameter | Type   | Description             |
|-----------|--------|-------------------------|
| order_id  | String | Indicates the order ID. |

- Example normal response

```
{ "order_id": "CS2009151216NO2U1"}
```
- 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](#).

## 5.6.15 Scaling Up Storage Space of a DB Instance

### Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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 5-92** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

## Request

**Table 5-93** Parameters

| Parameter      | Mandatory | Type   | Description                                                                                           |
|----------------|-----------|--------|-------------------------------------------------------------------------------------------------------|
| enlarge_volume | Yes       | Object | Specifies the target storage space after scaling up.<br>For details, see <a href="#">Table 5-94</a> . |

**Table 5-94** enlarge\_volume field data structure description

| Parameter   | 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<br><br>If you want to create an RDS for PostgreSQL DB instance that supports storage from 40 GB to 15,000 GB, contact customer service to apply for the required permissions.                                                                     |
| is_auto_pay | No        | Boolean | Specifies whether the order will be automatically paid when the storage space of yearly/monthly DB instances is scaled. <ul style="list-style-type: none"><li>• <b>true</b>: indicates the order will be automatically paid.</li><li>• <b>false</b>: indicates the order will be manually paid. The default value is <b>false</b>.</li></ul> |

## Example Request

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

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/action
{
 "enlarge_volume": {
 "size": 400,
 "is_auto_pay": true
 }
}
```

## Response

- **Pay-per-use**
  - Normal response

**Table 5-95** Parameters

| Parameter | Type   | Description |
|-----------|--------|-------------|
| job_id    | String | Task ID.    |

- Example normal response

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

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

- **Yearly/Monthly**

- Normal response

**Table 5-96** Parameters

| Parameter | Type   | Description |
|-----------|--------|-------------|
| order_id  | String | Order ID.   |

- Example normal response

```
{ "order_id": "CS2009151216NO2U2"}
```
- 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](#).

## 5.6.16 Configuring an Autoscaling Policy

### Function

This API is used to configure autoscaling for a DB instance. You will be billed for the new storage.

If available storage drops to a specified threshold or 10 GB, your storage will autoscale by 20% (in increments of 10 GB) of your allocated storage. If you have customized an autoscaling increment, the storage will autoscale by the specified increment. To customize an autoscaling increment, contact customer service.

Autoscaling up the storage of a read replica does not affect that of the primary instance. The new storage space of the read replica after autoscaling must be no less than that of the primary instance.

- Before calling this API, learn how to [authenticate](#) it.

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

## Constraints

- Your account balance must be greater than or equal to \$0 USD. If your account balance is insufficient, autoscaling will fail.
- This API is only available to RDS for MySQL and RDS for PostgreSQL instances whose storage type is cloud SSDs or extreme SSDs and storage space is at least 40 GB.
- Storage autoscaling is unavailable when the instance is in any of the following statuses: changing instance class, upgrading a minor version, migrating the standby instance, and rebooting.
- If a yearly/monthly instance has pending orders, it will not be autoscaled.
- The storage space can be autoscaled up only when your instance status is **Available** or **Storage full**. The maximum allowed storage is 4,000 GB.

## URI

- URI format  
PUT /v3/{*project\_id*}/instances/{*instance\_id*}/disk-auto-expansion
- Parameter description

**Table 5-97** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Instance ID.                                                                                             |

## Request

**Table 5-98** Parameters

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                    |
|---------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| switch_option | Yes       | Boolean | Whether to enable autoscaling. <ul style="list-style-type: none"><li>• <b>true</b>: indicates that autoscaling will be enabled.</li><li>• <b>false</b>: indicates that autoscaling will be disabled.</li></ul> |



| Parameter          | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                         |
|--------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit_size         | No        | Integer | Upper limit for autoscaling, in GB. This parameter is mandatory when <b>switch_option</b> is set to <b>true</b> .<br><br>The value ranges from 40 GB to 4,000 GB and must be no less than the current storage of the instance.                                                                                                                      |
| trigger_thres hold | No        | Integer | Threshold to trigger autoscaling. If the available storage drops to this threshold or 10 GB, autoscaling is triggered. This parameter is mandatory when <b>switch_option</b> is set to <b>true</b> .<br><br>Enumerated values: <ul style="list-style-type: none"> <li>• 10</li> <li>• 15</li> <li>• 20</li> </ul>                                   |
| step_percent       | No        | Integer | Autoscaling increment. It is the percentage of allocated storage that is automatically scaled up each time. Value range: 5% to 50%<br><br>This parameter is available when <b>switch_option</b> is set to <b>true</b> and autoscaling increment customization is enabled. If this parameter is not specified, the default value <b>20%</b> is used. |

## Example Request

Configure a storage autoscaling policy for a DB instance, with the trigger threshold set to 10% or 10 GB and upper limit to 4,000 GB.

```
PUT https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/3d39c18788b54a919bab633874c159dfin01/disk-auto-expansion
```

```
{
 "switch_option" : true,
 "limit_size" : 4000,
 "trigger_threshold" : 10
}
```

Configure a storage autoscaling policy for a DB instance, with the trigger threshold set to 10% or 10 GB, upper limit to 4,000 GB, and autoscaling increment to 20%.

```
{
 "switch_option" : true,
```

```
"limit_size" : 4000,
"trigger_threshold" : 10,
"step_percent" : 20
}
```

## Response

- 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](#).

## 5.6.17 Querying an Autoscaling Policy

### Function

This API is used to query the storage autoscaling policy of a DB instance.

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

### Constraints

This API is only available to RDS for MySQL and RDS for PostgreSQL instances using cloud SSDs or extreme SSDs.

### URI

- URI format  
GET /v3/{*project\_id*}/instances/{*instance\_id*}/disk-auto-expansion
- Parameter description

**Table 5-99** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Instance ID.                                                                                             |

## Request

- Parameter description  
None
- URI example  
GET <https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/3d39c18788b54a919bab633874c159dfin011/disk-auto-expansion>

## Response

- Normal response

**Table 5-100** Parameters

| Parameter         | Type    | Description                                                                                                                                                                                                                                                             |
|-------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| switch_option     | Boolean | Whether autoscaling is enabled. <ul style="list-style-type: none"><li><b>true</b>: Enabled.</li><li><b>false</b>: Disabled.</li></ul>                                                                                                                                   |
| limit_size        | Integer | Upper limit for autoscaling, in GB.                                                                                                                                                                                                                                     |
| trigger_threshold | Integer | Threshold to trigger autoscaling. If the available storage drops to this threshold or 10 GB, autoscaling is triggered.                                                                                                                                                  |
| step_percent      | Integer | Autoscaling increment. It is the percentage of allocated storage that is automatically scaled up each time.<br>This parameter is returned only when autoscaling increment customization is enabled.<br>To customize an autoscaling increment, contact customer service. |

- Example normal response  
Query the autoscaling policy with autoscaling increment customization disabled.

```
{
 "switch_option" : true,
 "limit_size" : 4000,
 "trigger_threshold" : 10
}
```

Query the autoscaling policy with autoscaling increment customization enabled.

```
{
 "switch_option" : true,
 "limit_size" : 4000,
 "trigger_threshold" : 10,
 "step_percent" : 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](#).

## 5.6.18 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 this API, learn how to [authenticate](#) it.
- Before calling this API, learn about [request header parameters](#).

### Constraints

- Single DB instances with certain specifications cannot be changed to primary/standby DB instances.
- Single SQL Server DB instances that are billed on the yearly/monthly basis and are created in a DeC cannot be changed to primary/standby DB instances.

### URI

- URI format  
POST /v3/{project\_id}/instances/{instance\_id}/action
- Parameter description

**Table 5-101** Parameters

| Parameter   | Mandatory | Description                                                                                              |
|-------------|-----------|----------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

## Request

**Table 5-102** Parameters

| Parameter    | Mandatory | Type   | Description                                    |
|--------------|-----------|--------|------------------------------------------------|
| single_to_ha | Yes       | Object | For details, see <a href="#">Table 5-103</a> . |

**Table 5-103** single\_to\_ha field data structure description

| Parameter        | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                       |
|------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| az_code_new_node | Yes       | String  | Specifies the AZ code of the DB instance node.                                                                                                                                                                                                                                                                                                                    |
| is_auto_pay      | No        | Boolean | Specifies whether the order will be automatically paid. This parameter can be specified only when the instance type is changed from single to primary/standby. <ul style="list-style-type: none"> <li><b>true</b>: indicates the order will be automatically paid.</li> <li><b>false</b> (default setting): indicates the order will be manually paid.</li> </ul> |
| ad_domain_info   | No        | Object  | Specifies AD domain information. This parameter is mandatory only when a single instance configured with the AD domain is to be changed to a primary/standby instance.<br><br>This parameter is available only for RDS for SQL Server.<br><br>For details about the field structure, see <a href="#">Table 5-104</a> .                                            |

**Table 5-104** ADDomainInfo field data structure description

| Parameter                 | Mandatory | Type   | Description                               |
|---------------------------|-----------|--------|-------------------------------------------|
| domain_admin_account_name | Yes       | String | Name of the domain administrator account. |
| domain_admin_pwd          | Yes       | String | Password of the domain administrator.     |

## Example Request

- Change a pay-per-use RDS for MySQL or RDS for PostgreSQL DB instance from single to primary/standby.

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

```
{
 "single_to_ha": {
 "az_code_new_node": "az2xahz"
 }
}
```

- Change a yearly/monthly RDS for MySQL or RDS for PostgreSQL DB instance from single to primary/standby.

```
{
 "single_to_ha": {
 "az_code_new_node": "az1xahz",
 "is_auto_pay": true
 }
}
```

- Change a pay-per-use RDS for SQL Server DB instance from single to primary/standby.

```
{
 "single_to_ha": {
 "az_code_new_node": "az2xahz",
 "ad_domain_info": {
 "dns_server_ip": "192.168.0.1",
 "domain_admin_account_name": "Administrator",
 "domain_admin_pwd": "password@123",
 "dc_domain_name": "test.com"
 }
 }
}
```

- Change a yearly/monthly RDS for SQL Server DB instance from single to primary/standby

```
{
 "single_to_ha": {
 "az_code_new_node": "az2xahz",
 "is_auto_pay": true,
 "ad_domain_info": {
 "dns_server_ip": "192.168.0.1",
 "domain_admin_account_name": "Administrator",
 "domain_admin_pwd": "password@123",
 "dc_domain_name": "test.com"
 }
 }
}
```

## Response

- **Pay-per-use DB instances**

- Normal response

**Table 5-105** Parameters

| Parameter | Type   | Description |
|-----------|--------|-------------|
| job_id    | String | Task ID.    |

- Example normal response

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

- Abnormal response

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

- **Yearly/Monthly DB instances**

- Normal response

**Table 5-106** Parameters

| Parameter | Type   | Description             |
|-----------|--------|-------------------------|
| order_id  | String | Indicates the order ID. |

- Example normal response

```
{
 "order_id": "CS2009151216NO2U2"
}
```

- 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](#).

## 5.6.19 Rebooting a DB Instance

### Function

This API is used to reboot a DB instance.

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

## Constraints

- The DB instance cannot reboot when it is being created, scaled, backed up, frozen, restored, or its instance class or port is being changed.
- The RDS DB instance will be unavailable during the reboot process. Exercise caution when performing this operation.

## URI

- URI format  
POST /v3/{project\_id}/instances/{instance\_id}/action
- Parameter description

**Table 5-107** Parameters

| Parameter   | Mandatory | Description                                                                                                                                                                                                      |
|-------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | <b>Definition</b><br>Project ID of a tenant in a region.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| instance_id | Yes       | <b>Definition</b><br>Instance ID.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                             |



## Request

**Table 5-108** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                 |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| restart   | Yes       | String | <b>Definition</b><br>Whether to restart the instance. For the MySQL and PostgreSQL DB engines, this parameter is left blank. For SQL Server, see <a href="#">Table 5-109</a> .<br><b>Constraints</b><br>N/A |

**Table 5-109** restart field description

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                    |
|----------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| restart_server | No        | Boolean | <b>Definition</b><br>Whether to restart the VM.<br><b>Constraints</b><br>This parameter is supported with the SQL Server DB engine only.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| forcible  | No        | Boolean | <p><b>Definition</b></p> <p>Whether to forcibly restart the instance.</p> <p><b>Constraints</b></p> <ul style="list-style-type: none"> <li>This parameter is supported with the SQL Server DB engine only.</li> <li>Forcible restart will forcibly interrupt uncommitted transactions.</li> </ul> <p><b>Range</b></p> <p>N/A</p> <p><b>Default Value</b></p> <p>N/A</p> |
| delay     | No        | Boolean | <p><b>Definition</b></p> <p>Whether to restart the instance during maintenance window.</p> <p><b>Constraints</b></p> <p>This parameter is supported with the SQL Server DB engine only.</p> <p><b>Range</b></p> <p>N/A</p> <p><b>Default Value</b></p> <p>N/A</p>                                                                                                       |

## Example Request

- Reboot an RDS for MySQL or RDS for PostgreSQL instance.  
POST <https://{Endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/action>  

```
{
 "restart": {}
}
```
- Reboot an RDS for SQL Server instance.  

```
{
 "restart": {
 "restart_server": false,
 "forcible": false,
 "delay": false
 }
}
```
- Forcibly reboot an RDS for SQL Server instance.  

```
{
 "restart": {
 "restart_server": false,
 "forcible": true,
 "delay": false
 }
}
```

- ```
}
}
```
- Reboot an RDS for SQL Server instance during the maintenance window.

```
{
  "restart": {
    "restart_server": false,
    "forcible": false,
    "delay": true
  }
}
```
 - Reboot the VM of an RDS for SQL Server instance.

```
{
  "restart": {
    "restart_server": true,
    "forcible": false,
    "delay": false
  }
}
```

Response

- Normal response

Table 5-110 Parameters

Parameter	Type	Description
job_id	String	Definition Task ID. Range N/A

- 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](#).

5.6.20 Deleting a DB Instance

Function

This API is used to delete a DB instance.

(To delete DB instances and read replicas billed in the yearly/monthly mode, unsubscribe from the order first. For details, see [Unsubscribing from a Yearly/Monthly Instance](#) or [Unsubscribing from Yearly/Monthly Resources](#).)

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

URI

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

Table 5-111 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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 5-112 Parameters

Parameter	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](#).

5.6.21 Querying DB Instances

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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}={v
alue}
- Parameter description

Table 5-113 Parameters

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

Parameter	Type	Mandatory	Description
id	String	No	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 (*). Constraints N/A Range N/A Default Value N/A
name	String	No	Definition Instance name. 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 (*). Constraints N/A Range N/A Default Value N/A

Parameter	Type	Mandatory	Description
type	String	No	Definition Instance type. Constraints N/A Range • Single: single-node instance • Ha: primary/standby instance • Replica: read replica • Enterprise: distributed instance (Enterprise Edition) Default Value N/A
datastore_type	String	No	Definition DB engine. Constraints The value is case-sensitive. Range • MySQL • PostgreSQL • SQLServer Default Value N/A
vpc_id	String	No	Definition VPC ID. To obtain this parameter value, use either of the following methods: • Method 1: Log in to the VPC console and view the VPC ID on the VPC details page. • Method 2: See the "Querying VPCs" section in the <i>Virtual Private Cloud API Reference</i>. Constraints N/A Range N/A Default Value N/A

Parameter	Type	Mandatory	Description
subnet_id	String	No	Definition Subnet ID. To obtain this parameter value, use either of the following methods: - 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>. Constraints N/A Range N/A Default Value N/A
offset	Integer	No	Definition Index offset. The query starts from the next piece of data indexed by this parameter. Constraints The value must be a non-negative number. Range An integer greater than or equal to 0 Default Value 0

Parameter	Type	Mandatory	Description
limit	Integer	No	Definition Number of records to be queried. Constraints N/A Range The default value is 100. The value cannot be a negative number. The minimum value is 1 and the maximum value is 100. Default Value 100
tags	Array of objects	No	Definition Tag key-value pairs of the instance. • {key} indicates the tag key. It must be unique and cannot be empty. • {value} indicates the tag value, which can be left empty. To query instances with multiple tag keys and values, separate key-value pairs with commas (,). A maximum of 10 key-value pairs are supported. For details, see Table 5-114. Constraints N/A Range N/A Default Value N/A

Table 5-114 tags field data structure description

Parameter	Type	Mandatory	Description
key	String	Yes	Definition Tag key. Constraints N/A Range It 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>. Default Value N/A
value	String	No	Definition Tag value. Constraints N/A 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>. Default Value N/A

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 5-115 Parameters

Parameter	Type	Description
instances	Array of objects	Definition Indicates the DB instance information. For details, see Table 5-116 .
total_count	Integer	Definition Indicates the total number of records. Range N/A

Table 5-116 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	Definition Indicates the DB instance status. Range • 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. • FROZEN: The instance is frozen. • 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. • STORAGE FULL: The instance storage space is full.
alias	String	Definition Indicates the DB instance alias. Range N/A

Parameter	Type	Description
private_ips	List<String>	Definition Indicates the private IP address list. It is a blank string until an ECS is created. Range N/A
private_dns_names	List<String>	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. Range N/A
public_dns_names	List<String>	Definition Indicates the public domain name list of the DB instance. Currently, only RDS for SQL Server supports public domain names. After a DB instance is created, you need to manually apply for a public domain name, or the public domain name is left blank. Range N/A
public_ips	List<String>	Definition Indicates the public IP address list. Range N/A

Parameter	Type	Description
port	Integer	Definition Indicates the database port number. Range • 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. • For RDS for SQL Server 2022 Enterprise Edition, 2022 Standard Edition, 2022 Web Edition, 2019 Enterprise Edition, 2019 Standard Edition, 2019 Web Edition, 2017 Enterprise Edition, 2017 Standard Edition, and 2017 Web Edition, the port number can be set to 1433 or 2100 to 9500 (excluding 5050, 5353, 5355, 5985, and 5986). For other editions, the port number can be set to 1433 or 2100 to 9500 (excluding 5355, 5985, and 5986). If this parameter is not set, the default value is as follows: • RDS for MySQL: 3306 • RDS for PostgreSQL: 5432 • RDS for SQL Server: 1433
enable_ssl	Boolean	Definition Indicates whether SSL is enabled for the instance. Range • true: SSL is enabled for the instance. • false: SSL is disabled for the instance.

Parameter	Type	Description
type	String	Definition Instance type. Range • Single: single-node instance • Ha: primary/standby instance • Replica: read replica • Enterprise: distributed instance (Enterprise Edition)
ha	Object	Definition Indicates the primary/standby DB instance information. Returned only when you obtain a primary/standby DB instance list. For details, see Table 5-117.
region	String	Definition Indicates the region where the DB instance is deployed. Range N/A
datastore	Object	Definition Indicates the database information. For details, see Table 5-118.
created	String	Definition Indicates the creation time. 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.

Parameter	Type	Description
updated	String	Definition Indicates the update time. 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.
db_user_name	String	Definition Indicates the default username. Range N/A
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
cpu	String	Definition Indicates the number of vCPUs. For example, the value 1 indicates 1 vCPU. Range N/A

Parameter	Type	Description
mem	String	Definition Indicates the memory size in GB. Range N/A
volume	Object	Definition Indicates instance storage. For details, see Table 5-119 .
switch_strategy	String	Definition Indicates the database failover priority. Range • reliability: Reliability is given priority during the failover. • availability: Availability is given priority during the failover.
read_only_by_user	Boolean	Definition Indicates the read-only status of the DB instance. This parameter is available only to RDS for MySQL. Range • true: indicates that the DB instance is set to read-only. • false: indicates that the DB instance is set to read/write.
backup_strategy	Object	Definition Indicates the backup policy. For details, see Table 5-120 .
maintenance_window	String	Definition Indicates the start time of the maintenance time window in the UTC format. Range N/A
nodes	Array of objects	Definition Indicates the primary/standby DB instance information. For details, see Table 5-121 .

Parameter	Type	Description
related_instance	Array of objects	Definition Indicates all associated DB instances. For details, see Table 5-122 .
disk_encryption_id	String	Definition Indicates the disk encryption key ID. Range N/A
enterprise_project_id	String	Definition Indicates the enterprise project ID. Range N/A
time_zone	String	Definition Indicates the time zone. Range N/A
charge_info	Object	Definition Indicates the billing information, which is yearly/monthly or pay-per-use. By default, pay-per-use is used. For details, see Table 5-123 .
tags	Array of objects	Definition Indicates the tag list. If there is no tag in the list, an empty array is returned. For details, see Table 5-125 .
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 PostgreSQL or RDS for SQL Server DB instance. Range N/A

Parameter	Type	Description
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
order_id	String	Definition Indicates the order ID. This field is returned only when the DB instance is billed on a yearly/monthly basis. Range N/A
associated_with_ddm	Boolean	Definition Indicates whether a DDM instance has been associated. Range N/A
max_iops	Long	Definition Indicates the maximum disk IOPS of the instance. This field is returned only for RDS for SQL Server instances. Range N/A
expiration_time	String	Definition Indicates the time when an instance expires. The format is yyyy-mm-ddThh:mm:ssZ. This field is returned only for yearly/monthly instances. Range N/A
serverless_info	Object	Definition Indicates the compute power range of a serverless instance, in RCU. For details, see Table 5-124.

Table 5-117 ha field data structure description

Parameter	Type	Description
replication_mode	String	Definition Indicates the replication mode for the standby instance. Range - 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. NOTE async indicates the asynchronous replication mode. semisync indicates the semi-synchronous replication mode. sync indicates the synchronous replication mode.

Table 5-118 datastore field data structure description

Parameter	Type	Description
type	String	Definition Indicates the DB engine. Its value can be any of the following and is case-insensitive: Range - MySQL - PostgreSQL - SQLServer
version	String	Definition Indicates the database version. When the DB engine is SQL Server, WEB indicates the web edition, SE indicates the standard edition, and EE indicates the enterprise edition. Range N/A

Parameter	Type	Description
complete_version	String	Definition Indicates the complete version number. This parameter is returned only when the DB engine is MySQL or PostgreSQL. Range N/A

Table 5-119 volume field data structure description

Parameter	Type	Description
type	String	Definition Storage type. The value is case-sensitive. Range • COMMON: SATA storage. • HIGH: SAS storage. • ULTRAHIGH: ultra-high I/O storage. • ULTRAHIGHPRO: ultra-high I/O (advanced) storage. This storage type is supported only with ultra-high performance (advanced) instances. • CLOUDSSD: cloud SSD storage. This storage type is supported only with general-purpose and dedicated instances. • LOCALSSD: local SSD storage. • ESSD: extreme SSD storage. This storage type is supported only with dedicated instances.
size	Integer	Definition Storage space in GB. Range N/A

Table 5-120 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. To extend the retention period, contact customer service. Automated backups can be retained for up to 2,562 days.

Table 5-121 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
role	String	Definition Indicates the node type. Range • master: primary node • slave: standby node • readreplica: read replica node
status	String	Definition Indicates the node status.

Parameter	Type	Description
availability_zone	String	Definition Indicates the AZ. Range N/A

Table 5-122 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 • replica_of: indicates a primary DB instance. • replica: indicates a read replica.

Table 5-123 chargeInfo field data structure description

Parameter	Mandatory	Type	Description
charge_mode	Yes	String	Definition Indicates the billing mode. Range • prePaid: indicates the yearly/monthly billing mode. • postPaid: indicates the pay-per-use billing mode.

Table 5-124 Data structure of the serverless_info field

Parameter	Man dato ry	Type	Description
min_compute_ unit	Yes	String	Definition Minimum compute power of a serverless instance, in RCU. Range 0.5–8, in RCU
max_compute_ unit	Yes	String	Definition Maximum compute power of a serverless instance, in RCU. Range 0.5–8, in RCU

Table 5-125 tags field data structure description

Parameter	Type	Description
key	String	Definition Indicates the tag key. Range N/A
value	String	Definition Indicates the tag value. Range N/A

 NOTE

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

- 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": "CLOUDSSD",
      "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_dns_names": [],
    "public_ips": [],
    "enable_ssl": false,
    "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": "",
    "read_only_by_user": false,
    "charge_info": {
      "charge_mode": "postPaid"
    },
    "backup_strategy": {
      "start_time": "19:00-20:00",
      "keep_days": 7
    },
    "maintenance_window": "02:00-06:00",
    "related_instance": [],
    "disk_encryption_id": "",
    "enterprise_project_id": "0",
    "time_zone": "",
    "tags": [
      {
        "key": "rds001",
        "value": "001"
      },
      {
        "key": "rds002",
        "value": "002"
      }
    ],
    "associated_with_ddm": false
  }], "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": "CLOUDSSD",
      "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"],
    "enable_ssl": false,
    "private_dns_names": ["ed7cc6166ec24360a5ed5c5c9c2ed726in01.internal.xxx.com"],
    "public_dns_names": [],
    "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": "",
    "read_only_by_user": false,
    "charge_info": {
      "charge_mode": "postPaid"
    },
    "backup_strategy": {
      "start_time": "19:00-20:00",
      "keep_days": 7
    },
    "maintenance_window": "02:00-06:00",
    "related_instance": [],
    "disk_encryption_id": "",
    "enterprise_project_id": "0",
    "time_zone": "",
    "tags": [
      {
        "key": "rds001",
        "value": "001"
      },
      {
        "key": "rds002",
        "value": "002"
      }
    ],
    "associated_with_ddm": false
  }, {
    "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": "CLOUDSSD",
      "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": ["ed7cc6166ec24360a5ed5c9c2ed726in01.internal.xxx.com"],
  "public_dns_names": [],
  "public_ips": [],
  "enable_ssl": false,
  "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": "",
  "read_only_by_user": false,
  "charge_info": {
    "charge_mode": "postPaid"
  },
  "backup_strategy": {
    "start_time": "19:00-20:00",
    "keep_days": 7
  },
  "maintenance_window": "02:00-06:00",
  "related_instance": [],
  "disk_encryption_id": "",
  "enterprise_project_id": "0",
  "time_zone": "",
  "tags": [
    {
      "key": "rds001",
      "value": "001"
    },
    {
      "key": "rds002",
      "value": "002"
    }
  ],
  "associated_with_ddm": false
}],
"total_count": 2
}
```

- **Query MySQL serverless DB instances.**

```
{
  "instances": [
    {
      "id": "06f4bde8fec442d7bb122f742c9e51dein01",
      "status": "ACTIVE",
      "name": "rds-4961",
      "port": 3306,
      "type": "Ha",
      "ha": {
        "replication_mode": "semisync"
      },
      "region": "aaa",
      "datastore": {
        "type": "MySQL",
        "version": "5.7"
      },
      "created": "2023-10-24T03:10:28+0000",
      "updated": "2023-10-24T03:10:28+0000",
      "volume": {
        "type": "CLOUDSSD",
        "size": 40
      },
    },
  ],
}
```

```

"nodes": [
  {
    "id": "0c4844b1323e4f30a7a49b021a047e36no01",
    "name": "rds-4961_node0",
    "role": "master",
    "status": "ACTIVE",
    "availability_zone": "bbb"
  },
  {
    "id": "62bb9a79e2c34c369845ede701a4cf34no01",
    "name": "rds-4961_node1",
    "role": "slave",
    "status": "ACTIVE",
    "availability_zone": "bbb"
  }
],
"tags": [],
"alias": "",
"private_ips": [],
"private_dns_names": [
  "0aabbcc.mysql.rds.myhuaweicloud.com"
],
"public_dns_names": [],
"public_ips": [],
"enable_ssl": false,
"db_user_name": "root",
"vpc_id": "a70b5818-a306-426d-a53e-11b6b57c31af",
"subnet_id": "7cac9cc5-7b87-414e-9913-cbbc5051347e",
"security_group_id": "89f258c5-4b81-4ef0-be30-34f2ee07dd1c",
"flavor_ref": "rds.mysql.serverless.ha",
"switch_strategy": "reliability",
"read_only_by_user": false,
"charge_info": {
  "charge_mode": "postPaid"
},
"backup_strategy": {
  "start_time": "19:00-20:00",
  "keep_days": 7
},
"maintenance_window": "18:00-22:00",
"related_instance": [],
"disk_encryption_id": "",
"enterprise_project_id": "0",
"time_zone": "UTC+08:00",
"order_id": "",
"associated_with_ddm": false,
"serverless_info": {
  "max_compute_unit": "0.5",
  "min_compute_unit": "8"
}
},
"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](#).

5.6.22 Binding and Unbinding an EIP

Function

This API is used to bind an EIP to a DB instance for public access or unbind an EIP from the DB instance as required.

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

Constraints

An EIP cannot be bound to or unbound from a DB instance that is being created, modified, restored, frozen, or rebooted.

URI

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

Table 5-126 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-127 Parameters

Parameter	Mandatory	Type	Description
public_ip	No	String	NOTICE When is_bind is true , public_ip is mandatory. Specifies the EIP to be bound. The value must be in the standard IP address format.

Parameter	Mandatory	Type	Description
public_ip_id	No	String	NOTICE When is_bind is true , public_ip_id is mandatory. Specifies the EIP ID. The value must be in the standard UUID format.
is_bind	Yes	Boolean	true: Bind an EIP. false: Unbind an EIP.

Example Request

- Bind an EIP to a DB instance.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdae3435in01/public-ip
```

```
{
  "public_ip": "10.10.10.1",
  "public_ip_id": "8403e9cd-a7fa-4288-8b15-c7ceac1etest",
  "is_bind": true
}
```

- Unbind an EIP from a DB instance.

```
{
  "is_bind": false
}
```

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](#).

5.6.23 Changing the Failover Priority

Function

This API is used to change the failover priority for primary/standby DB instances to meet different service requirements. You can select **reliability** or **availability**.

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

Constraints

- This API is available to RDS for MySQL only.
- This API is supported for primary/standby DB instances only.
- The failover priority cannot be changed if the DB instance is in any of the following statuses: creating, upgrading, creating users, or deleting users.

URI

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

Table 5-128 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-129 Parameters

Parameter	Mandatory	Type	Description
repairStrategy	Yes	String	Specifies the failover priority. Valid value: • reliability: Data reliability is preferentially ensured during the failover to minimize the amount of lost data. It is recommended for services that require high data consistency. • availability: Data availability is preferentially ensured during the failover to recover services quickly. It is recommended for services that have high requirements on the database online duration.

Example Request

Change the failover priority of a DB instance to availability.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsf23fsdsae3435in01/failover/strategy
{
  "repairStrategy": "availability"
}
```

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](#).

5.6.24 Manually Switching Primary/Standby DB Instances

Function

This API is used to manually switch primary/standby DB instances as required.

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

Constraints

- This API is supported for primary/standby DB instances only.
- This operation cannot be performed if the DB instance is in any of the following statuses: creating, rebooting, upgrading, changing instance class, restoring, changing port, deleting database account, or creating database account.
- The primary/standby switchover does not change the floating IP address of your instance.

URI

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

Table 5-130 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-131 Parameters

Parameter	Mandatory	Type	Description
force	No	Boolean	Whether to perform a forcible primary/standby switchover. By default, this parameter is left blank, indicating that the switchover is not performed forcibly. true: A forcible switchover is performed. false: No forcible switchover is performed. NOTE This parameter is valid only for the PostgreSQL DB engine.

Example Request

- Perform a primary/standby switchover.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsf23fsfda3435in01/failover
{}
```

- Perform a forcible primary/standby switchover.

```
{
  "force":true
}
```

Response

- Normal response

Parameter	Description
workflowId	Indicates the workflow ID.
instanceId	Indicates the DB instance ID.
nodeId	Indicates the node ID.

- Example normal response

```
{
  "workflowId":"072beb09-0573-40bf-bfe8-4be5cec9e85a",
  "instanceId":"794c38e5309344818f4b33b86ebce9b4in03",
  "nodeId":"b94ba815747040f1b0d641cd13364a06no03"
}
```

- 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](#).

5.6.25 Changing the Data Replication Mode of Primary/Standby DB Instances

Function

This API is used to change the data replication mode of primary/standby DB instances based on service requirements.

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

Constraints

- This API is available to RDS for MySQL only.
- This API is supported for primary/standby DB instances only.
- The replication mode cannot be changed if the DB instance is in any of the following statuses: creating, upgrading, changing instance class, creating users, or deleting users.
- The replication mode in the request must be different from that of the DB instance. You can log in to the management console to view the replication mode of the DB instance. For details about how to change the replication mode, see [Changing the Replication Mode](#).

URI

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

Table 5-132 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-133 Parameters

Parameter	Mandatory	Type	Description
mode	Yes	String	Specifies the replication mode. For RDS for MySQL, the value can be any of the following: • async: asynchronous • semisync: semi-synchronous For RDS for PostgreSQL, the value can be any of the following: • async: asynchronous • sync: synchronous

Example Request

Change the replication mode of a primary/standby DB instance to asynchronous.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfcae23fsfdae3435in01/failover/mode
{
  "mode": "async"
}
```

Response

- Normal response

Parameter	Description
workflowId	Indicates the workflow ID.
instanceId	Indicates the DB instance ID.
replicationMode	Indicates the replication mode.

- Example normal response

```
{
  "instanceId": "c8a7d0abe94840dda99bc437e9442982in01",
  "replicationMode": "async",
  "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](#).

5.6.26 Changing Read/Write Permissions

Function

This API is used to change read/write permissions of RDS for MySQL DB instances to meet your workload requirements. After a DB instance is set to read-only, data cannot be written to it.

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

Constraints

- This API is available to RDS for MySQL only.
- This API is available to only single and primary/standby DB instances.
- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, frozen, and abnormal.
- If your instance becomes read-only for other reasons (such as full storage and DRS migration), it cannot be changed to readable and writable through this API.
- This API is only used to configure read/write permissions for primary DB instances.
- Changing read/write permissions is in OBT in some regions. If this function is not available in your region, contact customer service to configure a whitelist.

URI

- URI format
PUT /v3/{project_id}/instances/{instance_id}/readonly-status
- Parameter description

Table 5-134 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

Table 5-135 Parameters

Parameter	Mandatory	Type	Description
readonly	Yes	Boolean	Whether to set the instance to read-only. • true: indicates that the instance will be set to read-only. • false: indicates that the instance will be set to read/write.

Example Request

Set a DB instance to read-only.

```
PUT https://{endpoint}/v3/054ea741f700d4a32f1bc00f5c80dd4c/instances/  
5b409baece064984a1b3eef6addae50cin01/readonly-status
```

```
{  
  "readonly" : true  
}
```

Response

- Normal response

Table 5-136 Parameters

Parameter	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](#).

5.6.27 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 this API, learn how to [authenticate](#) it.
- Before calling this API, learn about [request header parameters](#).

Constraints

- This API is only available to RDS for MySQL and RDS for PostgreSQL.
- Primary/standby instances running MySQL 5.6, 5.7, or 8.0 support standby instance migration to another AZ. To migrate an RDS for MySQL 8.0 standby instance, contact customer service to apply for the required permissions.
- 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 5-137 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-138 Parameters

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

Parameter	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/dsfac23fsfdae3435in01/migrateslave
{
  "nodeId": "0119b1068b874cb4a5202989a06b6094no01",
  "azCode": "az2"
}
```

Response

- Normal response

Parameter	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](#).

5.6.28 Configuring the Maintenance Window

Function

This API is used to change the maintenance window as required. To prevent service interruption, the maintenance window should fall within the off-peak hours.

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

URI

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

Table 5-139 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-140 Parameters

Parameter	Mandatory	Type	Description
start_time	Yes	String	Specifies the start time (UTC).
end_time	Yes	String	Specifies the end time (UTC). • For RDS for MySQL and RDS for PostgreSQL databases, the start time and end time must be on the hour, and the interval between them must be one to four hours. • For RDS for SQL Server databases, the interval between the start time and end time must be four hours.

Example Request

Set the maintenance window of a DB instance to 22:00-02:00.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/ops-window
{
  "start_time": "22:00",
  "end_time": "02:00"
}
```

Response

- 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](#).

5.6.29 Upgrading the Minor Version of a DB Instance

Function

This API is used to upgrade minor versions of RDS for MySQL or RDS for PostgreSQL instances.

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

Constraints

- This API is available to RDS for MySQL and RDS for PostgreSQL only.
- The minor versions of any RDS for PostgreSQL instances containing abnormal nodes cannot be upgraded.
- The minor versions of RDS for PostgreSQL 11 instances earlier than 11.2 cannot be upgraded.
- For RDS for PostgreSQL, minor versions can be upgraded immediately upon request submission only, but not during the specified maintenance window.
- A minor version upgrade of RDS for PostgreSQL instances can cause a primary/standby switchover.

URI

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

Table 5-141 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

Table 5-142 Parameters

Parameter	Mandatory	Type	Description
is_delayed	No	Boolean	Whether to delay the upgrade until the maintenance window. Valid values: • true: The upgrade will be delayed. The instance will be upgraded during the specified maintenance window. • false (default): The instance is upgraded immediately.

Example Request

Upgrade the minor version of a DB instance.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
cee5265e1e5845649e354841234567dfin01/db-upgrade

{
  "is_delayed" : false
}
```

Response

- Normal response

Table 5-143 Parameters

Parameter	Type	Description
job_id	String	Task ID.

- 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](#).

5.6.30 Configuring an Automatic Minor Version Upgrade Policy for a DB Instance (RDS for PostgreSQL)

Function

This API is used to configure an automatic minor version upgrade policy for a DB instance.

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

URI

- URI format
PUT /v3/{project_id}/instances/{instance_id}/db-auto-upgrade
- Parameter description

Table 5-144 Parameters

Parameter	Mandato ry	Type	Description
project_id	Yes	String	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints The value cannot be empty. Range N/A Default Value N/A
instance_id	Yes	String	Definition Instance ID. Constraints The value cannot be empty. Range N/A Default Value N/A

Request

Table 5-145 Parameters

Parameter	Mandatory	Type	Description
switch_option	Yes	Boolean	Definition Whether to enable automatic minor version upgrade. Constraints N/A Range • true: Automatic minor version upgrade is enabled. • false: Automatic minor version upgrade is disabled. Default Value N/A

Example Request

Enable automatic minor version upgrade for a DB instance.

```
{  
  "switch_option" : true  
}
```

Response

- Normal response

Table 5-146 Parameters

Parameter	Type	Description
resp	String	Definition Response result. Range N/A

- 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](#).

5.6.31 Querying the Automatic Minor Version Upgrade Policy of a DB Instance (RDS for PostgreSQL)

Function

This API is used to query the automatic minor version upgrade policy of a DB instance.

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

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/db-auto-upgrade
- Parameter description

Table 5-147 Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints The value cannot be empty. Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Definition Instance ID. Constraints The value cannot be empty. Range N/A Default Value N/A

Request

None

Example Request

Query the automatic minor version upgrade policy of a DB instance.

```
GET https://{Endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
e28979107ed04d3b8b2f1b819b8d2be3in03/db-auto-upgrade
```

Response

- Normal response

Table 5-148 Parameters

Parameter	Type	Description
switch_option	Boolean	Definition Whether automatic minor version upgrade is enabled. Range true: Automatic minor version upgrade is enabled. false: Automatic minor version upgrade is disabled.

- Example normal response

```
{
  "switch_option": 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](#).

5.6.32 Configuring a Monitoring by Seconds Policy

Function

This API is used to configure a Monitoring by Seconds policy for a DB instance. The policy takes effect about 5 minutes after you configure it.

Monitoring by Seconds at an interval of 1s or 5s is billed on a pay-per-use basis. You are charged once per hour.

Monitoring by Seconds policies of the primary instance and read replicas are independent from each other. Monitoring by Seconds is automatically disabled for instances with fewer than 4 vCPUs.

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

Constraints

- This API is in OBT. To use this API, contact customer service.
- This API is available to only RDS for MySQL instances with 4 vCPUs or more.

URI

- URI format
PUT /v3/{*project_id*}/instances/{*instance_id*}/second-level-monitor
- Parameter description

Table 5-149 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

Table 5-150 Parameters

Parameter	Mandatory	Type	Description
switch_option	Yes	Boolean	Whether to enable Monitoring by Seconds. • true: indicates that Monitoring by Seconds will be enabled. • false: indicates that Monitoring by Seconds will be disabled.
interval	No	Integer	Monitoring interval, which can be 1s or 5s. Enumerated values: • 1 • 5

Example Request

- Enable Monitoring by Seconds for a DB instance, with an interval set to 5s.

```
PUT https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/3d39c18788b54a919bab633874c159dfin01/second-level-monitor
{
  "switch_option": true,
  "interval": 5
}
```

- Disable Monitoring by Seconds.

```
{
  "switch_option": false
}
```

Response

- 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](#).

5.6.33 Querying a Monitoring by Seconds Policy

Function

This API is used to query the Monitoring by Seconds policy of a DB instance.

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

Constraints

- This API is in OBT. To use this API, contact customer service.
- This API is available to RDS for MySQL only.

URI

- URI format
GET /v3/{*project_id*}/instances/{*instance_id*}/second-level-monitor
- Parameter description

Table 5-151 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

- Parameter description
None
- URI example
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/
3d39c18788b54a919bab633874c159dfin01/second-level-monitor

Response

- Normal response

Table 5-152 Parameters

Parameter	Type	Description
switch_option	Boolean	Whether Monitoring by Seconds is enabled. • true: indicates that Monitoring by Seconds is enabled. • false: indicates that Monitoring by Seconds is disabled.
interval	Integer	Monitoring interval, which can be 1s or 5s. Enumerated values: • 1 • 5

- Example normal response

```
{
  "switch_option" : true,
  "interval" : 5
}
```

- 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](#).

5.6.34 Enabling TDE for a DB Instance (RDS for SQL Server)

Function

This API is used to enable TDE for a DB instance.

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

Constraints

- This API supports only RDS for SQL Server instances.
- TDE cannot be disabled after being enabled, and it cannot be enabled again.
- The DB engine of the target instance must be of the Enterprise Edition or 2019 Standard Edition.

URI

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

Table 5-153 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

The following parameters are required for TDE rotation. To use this function, contact customer service first.

Table 5-154 Parameters

Parameter	Mandatory	Type	Description
rotate_day	No	Integer	Days of rotation. Value range: 1-100000.
secret_id	No	String	Key ID.
secret_name	No	String	Key name.
secret_version	No	String	Key version.

Example Request

- Enable TDE for a DB instance (with TDE rotation not used).

```
PUT https://{Endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/  
3d39c18788b54a919bab633874c159d4fin04/tde  
{}
```

- Enable TDE for a DB instance (with TDE rotation used).

```
{  
  "rotate_day": 365,  
  "secret_id": "d0964270-2716-405b-bc3a-12a942451716",  
  "secret_name": "test",  
  "secret_version": "v10"  
}
```

Response

- Normal response

Table 5-155 Parameters

Parameter	Type	Description
job_id	String	Taskflow 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](#).

5.6.35 Querying TDE Status of a DB Instance (RDS for SQL Server)

Function

This API is used to query the TDE status.

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

Constraints

This API supports only RDS for SQL Server instances.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/tde-status
- Parameter description

Table 5-156 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

- Parameter description

None

- URI example

```
GET https://{Endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/3d39c18788b54a919bab633874c159dfin04/tde-status
```

Response

- Normal response

Table 5-157 Parameters

Parameter	Type	Description
instance_id	String	Instance ID.
tde_status	String	TDE status. Enumerated values: open: Enabled close: Disabled

- Example normal response

```
{
  "instance_id": "3d39c18788b54a919bab633874c159dfin04",
  "tde_status": "open"
}
```

- 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](#).

5.6.36 Unlocking a DB Instance from the Read-Only State

Function

This API is used to remove the read-only status of a DB instance.

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

Constraints

This API is available to RDS for PostgreSQL only.

URI

- URI format
PUT /v3/{project_id}/instances/{instance_id}/unlock-node-readonly-status
- Parameter description

Table 5-158 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

Table 5-159 Parameters

Parameter	Mandatory	Type	Description
status_preservation_time	Yes	Integer	Duration (in minutes) during which the HA component no longer sets the instance to read-only. Minimum value: 0 Maximum value: 1440

Example Request

Unlock a DB instance from the read-only state.

```
PUT https://{Endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/
```



```
42d4b4fc17d144bbb3ba64a306e68c72in03/unlock-node-readonly-status
{
  "status_preservation_time" : 5
}
```

Response

- Normal response

Table 5-160 Parameters

Parameter	Type	Description
resp	String	If the operation is successful, SUCCESS is returned. Otherwise, an error code is returned.

- Example normal response

```
{
  "resp" : "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](#).

5.7 DR Instances (RDS for PostgreSQL)

5.7.1 Querying DR relationships

Function

This API is used to query DR relationships.

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

Constraints

DR relationship query is supported only for RDS for PostgreSQL 12 and later.

URI

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

Table 5-161 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .

Request

Table 5-162 Parameters

Parameter	Mandatory	Type	Description
id	No	String	DR relationship ID.
status	No	String	DR configuration status.
master_instance_id	No	String	Primary instance ID.
master_region	No	String	Region where the primary instance is located.
slave_instance_id	No	String	DR instance ID.
slave_region	No	String	Region where the DR instance is located.
create_at_start	No	Long	Creation start time.
create_at_end	No	Long	Creation end time.
order	No	String	Sorting order. • DESC: descending order • ASC: ascending order Default value: DESC

Parameter	Mandatory	Type	Description
sort_field	No	String	Sorting field. • status: Data is sorted by DR configuration status. • time: Data is sorted by DR configuration time. • master_region: Data is sorted by region where the primary instance is located • slave_region: Data is sorted by region where the DR instance is located Default value: time
offset	No	Integer	Index offset. 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	No	Integer	Number of records to be queried. The default value is 10. The value must be a positive integer. The minimum value is 1 and the maximum value is 100.

Example Request

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/disaster-recovery-infos
{
  "status": "normal",
  "order": "ASC",
  "sort_field": "time",
  "offset": 0,
  "limit": 10
}
```

Response

- Normal response

Table 5-163 Parameters

Parameter	Type	Description
total_count	Integer	Total number of records.

Parameter	Type	Description
instance_dr_infos	Array of objects	DR information. For details, see Table 5-164 .

Table 5-164 instance_dr_infos field description

Parameter	Type	Description
id	String	DR relationship ID.
status	String	DR configuration status.
failed_message	String	Failure message.
replica_state	String	Synchronization status. The value can be 0 or -1 . The value 0 indicates that the synchronization is normal, and -1 indicates that the synchronization is abnormal.
wal_write_receive_delay_in_mb	String	WAL send lag volume, in MB. It means the difference between the WAL Log Sequence Number (LSN) written by the primary instance and the WAL LSN received by the DR instance.
wal_write_replay_delay_in_mb	String	End-to-end delayed WAL size, in MB. It refers to the difference between the WAL LSN written by the primary instance and the WAL LSN replayed by the DR instance.
wal_receive_replay_delay_in_ms	String	Replay delay, in milliseconds, on the DR instance.
master_instance_id	String	Primary instance ID.
master_region	String	Region where the primary instance is located.
slave_instance_id	String	DR instance ID.
slave_region	String	Region where the standby instance is located
build_process	String	Process for configuring disaster recovery (DR). • master: process of configuring DR capability for the primary instance • slave: process of configuring DR for the DR instance

Parameter	Type	Description
time	Long	DR configuration time.

- Example normal response

```
{
  "total_count": 1,
  "instance_dr_infos": [
    {
      "id": "57160f82-e6bb-44bc-80db-0d950d4f3b40",
      "status": "failed",
      "failed_message": "the network is disconnected",
      "replica_state": "0",
      "wal_write_receive_delay_in_mb": "10.0",
      "wal_write_replay_delay_in_mb": "10.0",
      "wal_receive_replay_delay_in_ms": "0",
      "master_instance_id": "fab4e3df67c24aa0a5b41bc2bcb41918in03",
      "master_region": "region-A",
      "slave_instance_id": "df50adb922ef42a495943b304f8aa551in03",
      "slave_region": "region-B",
      "time": 1702551254685
    }
  ]
}
```

- 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 Configuring the DR Capability for a Primary DB Instance

Function

This API is used to configure DR for a primary DB instance when establishing a cross-cloud or cross-region DR relationship.

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

Constraints

- Before using this function, ensure that the network between the VPC CIDR blocks of the DB instances across clouds or regions is connected, and configure security group rules to allow access from database ports in the VPC CIDR blocks. The DR relationship cannot be established if only the network is connected but security group rules are not configured.

- The primary DB instance and DR instance are available and are deployed in different clouds or regions. The primary DB instance is deployed in primary/standby mode and the DR instance is deployed in standalone mode.
- The vCPUs, memory, and storage space of the DR instance must be greater than or equal to those of the primary instance.
- The underlying architecture and major version of the DR instance must be the same as those of the primary DB instance.
- If the DR instance's minor version differs from the primary DB instance, it will automatically update to be the same as that of the primary DB instance after the DR relationship is established.
- Cross-cloud or cross-region DR relationships cannot be established across major versions.
- After the API for configuring DR for the primary instance is called, you cannot change the instance class or perform a primary/standby switchover until the DR relationship is set up.
- After changing the database port or floating IP address of the primary instance, you need to re-establish the DR relationship.
- RDS for PostgreSQL 12 and later versions support cross-cloud or cross-region DR.

URI

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

Table 5-165 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-166 Parameters

Parameter	Mandatory	Type	Description
build_master_dr_relation	Yes	Object	Specifies the DR instance information required for configuring the DR relationship for the primary DB instance. For details, see Table 5-167 .

Table 5-167 build_master_dr_relation field description

Parameter	Mandatory	Type	Description
target_instance_id	Yes	String	Specifies the ID of the DR instance.
target_project_id	Yes	String	Specifies the project ID of the tenant to which the DR instance belongs.
target_region	Yes	String	Specifies the ID of the region where the DR instance resides.
target_ip	Yes	String	Specifies the data virtual IP address (VIP) of the DR instance.
target_subnet	Yes	String	Specifies the subnet IP address of the DR instance.

Example Request

Configure a DR relationship for a primary DB instance, with the DR instance deployed in region aaa.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/24c6678f474241fe89ee9c42f768022ein03/action
{
  "build_master_dr_relation": {
    "target_instance_id": "c39bd176fb0540929f6add80b91b212cin03",
    "target_project_id": "054b61972980d4552f0bc00ac8d3f5cd",
    "target_region": "aaa",
    "target_ip": "192.168.3.238",
    "target_subnet": "192.168.3.1/24"
  }
}
```

Response

- Normal response

Table 5-168 Parameters

Parameter	Type	Description
job_id	String	Workflow ID.

- Example normal response

```
{  
  "job_id": "184f29cd-be1a-43f1-5b6bc5500e73"  
}
```

- 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](#).

5.7.3 Configuring the DR Capability for a DR Instance

Function

This API is used to configure DR for a DR instance when establishing a cross-cloud or cross-region DR relationship.

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

Constraints

- Before using this function, ensure that the network between the VPC CIDR blocks of the DB instances across clouds or regions is connected, and configure security group rules to allow access from database ports in the VPC CIDR blocks. The DR relationship cannot be established if only the network is connected but security group rules are not configured.
- Before configuring disaster recovery for the DR instance, you must configure it for the primary instance. Otherwise, the DR relationship cannot be established.
- The primary DB instance and DR instance are available and are deployed in different clouds or regions. The DR instance is deployed in standalone mode.
- The vCPUs, memory, and storage space of the DR instance must be greater than or equal to those of the primary instance.

- The underlying architecture and major version of the DR instance must be the same as those of the primary DB instance.
- If the DR instance's minor version differs from the primary DB instance, it will automatically update to be the same as that of the primary DB instance after the DR relationship is established.
- Cross-cloud or cross-region DR relationships cannot be established across major versions.
- After the API for configuring DR for the DR instance is called, you cannot change the instance class or perform a primary/standby switchover until the DR relationship is set up.
- RDS for PostgreSQL 12 and later versions support cross-cloud or cross-region DR.
- After a DR instance is set up, a minor version upgrade cannot be performed.
- Modifying a parameter of the primary instance does not modify that of the DR instance. You need to modify the parameter of the DR instance separately.
- RDS for PostgreSQL DR instances do not support point-in-time recovery (PITR) or CBR snapshot-based backups. Perform such operations on the primary instance if needed.

URI

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

Table 5-169 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-170 Parameters

Parameter	Mandatory	Type	Description
build_slave_dr_relation	Yes	Object	Specifies the primary DB instance information required for configuring the DR relationship for the DR instance. For details, see Table 5-171 .

Table 5-171 build_slave_dr_relation field description

Parameter	Mandatory	Type	Description
target_instance_id	Yes	String	Specifies the ID of the primary DB instance.
target_project_id	Yes	String	Specifies the project ID of the tenant to which the primary DB instance belongs.
target_region	Yes	String	Specifies the ID of the region where the primary DB instance resides.
target_ip	Yes	String	Specifies the data VIP of the primary DB instance.

Example Request

Configure a DR relationship for a DR instance, with the primary DB instance deployed in region aaa.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/24c6678f474241fe89ee9c42f768022ein03/action
{
  "build_slave_dr_relation": {
    "target_instance_id": "c39bd176fb0540929f6add80b91b212cin03",
    "target_project_id": "054b61972980d4552f0bc00ac8d3f5cd",
    "target_region": "aaa",
    "target_ip": "192.168.3.238"
  }
}
```

Response

- Normal response

Table 5-172 Parameters

Parameter	Type	Description
job_id	String	Workflow ID.

- Example normal response

```
{
  "job_id": "184f29cd-be1a-43f1-5b6bc5500e73"
}
```
- 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](#).

5.7.4 Promoting a DR Instance to Be the Primary DB Instance

Function

This API is used to promote a DR instance to be the primary DB instance when a cross-cloud or cross-region DR relationship between DB instances has become abnormal.

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

Constraints

- Before using this function, ensure that the network between the VPC CIDR blocks of the DB instances across clouds or regions is connected, and configure security group rules to allow access from database ports in the VPC CIDR blocks. The DR relationship cannot be established if only the network is connected but security group rules are not configured.
- The primary DB instance and DR instance are available and are deployed in different clouds or regions. The DR instance is deployed in standalone mode.
- The DR relationship between the primary DB instance and DR instance has been established.
- RDS for PostgreSQL 12 and later versions support DR instance promotion to the primary instance.

URI

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

Table 5-173 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-174 Parameters

Parameter	Mandatory	Type	Description
drreplica_to_master	Yes	Object	Specifies whether the DR instance is promoted to be the primary instance. No other parameters are required.

Example Request

Promote a DR instance to the primary DB instance.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/24c6678f474241fe89ee9c42f768022ein03/action
```

```
{
  "drreplica_to_master": {}
}
```

Response

- Normal response

Table 5-175 Parameters

Parameter	Type	Description
job_id	String	Indicates the workflow ID.

- Example normal response

```
{
  "job_id": "04efe8e2-9255-44ae-a98b-d87cae411890"
}
```
- 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](#).

5.7.5 Querying the DR Replication Status

Function

This API is used to query the replication status and delay between the primary DB instance and DR instance after a cross-cloud or cross-region DR relationship is established.

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

Constraints

- Before using this function, ensure that the network between the VPC CIDR blocks of the DB instances across clouds or regions is connected, and configure security group rules to allow access from database ports in the VPC CIDR blocks. The DR relationship cannot be established if only the network is connected but security group rules are not configured.
- A DR relationship between the primary DB instance and DR instance has been established.
- DR instances of RDS for PostgreSQL 12 and later versions support DR replication status query.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/disaster-recovery
- Parameter description

Table 5-176 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	DR instance ID.

Request

- Parameter description
None
- Example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/24c6678f474241fe89ee9c42f768022ein03/disaster-recovery
- Request example
None

Response

- Normal response

Table 5-177 Parameters

Parameter	Type	Description
replica_state	String	Indicates the synchronization status. The value can be 0 or -1 . The value 0 indicates that the synchronization status is normal, and the value -1 indicates that the synchronization status is abnormal. NOTE If the primary DB instance does not exist, the synchronization status between the primary DB instance and DR instance is abnormal.
wal_write_receive_delay_in_mb	String	Indicates the sending delay in MB, that is, the difference between the WAL Log Sequence Number (LSN) written by the primary DB instance and the WAL LSN received by the DR instance.
wal_write_replay_delay_in_mb	String	Indicates the end-to-end delay in MB, that is, the difference between the WAL LSN written by the primary DB instance and the WAL LSN replayed by the DR instance.
wal_receive_replay_delay_in_ms	String	Indicates the replay delay in millisecond on the DR instance.

- Example normal response

```
{
  "replica_state": "0",
  "wal_write_receive_delay_in_mb": "10.0",
  "wal_write_replay_delay_in_mb": "10.0",
  "wal_receive_replay_delay_in_ms": "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](#).

5.7.6 Querying DR Instances in Batches

Function

This API is used to query DR instances in batches.

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

Constraints

RDS for PostgreSQL 12 and later versions support cross-cloud or cross-region DR.

URI

- URI format
GET /v3/{project_id}/instances/disaster-recovery-relation
- Parameter description

Table 5-178 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .

Request

- Parameter description
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/disaster-recovery-relation
- Request example
None

Response

- Normal response

Table 5-179 Parameters

Parameter	Type	Description
instance_dr_relations	Array of objects	DR instance list. For details, see Table 5-180 .

Table 5-180 Data structure description of instance_dr_relations

Parameter	Type	Description
instance_id	String	Instance ID in the current region.
master_instance	Object	Primary instance information. For details, see Table 5-181 .
slave_instances	Array of objects	DR instance information. For details, see Table 5-182 .

Table 5-181 Data structure description of master_instance

Parameter	Type	Description
instance_id	String	Instance ID.
region	String	Region.
project_id	String	Project ID.
project_name	String	Project name.

Table 5-182 Data structure description of slave_instances

Parameter	Type	Description
instance_id	String	Instance ID.
region	String	Region.
project_id	String	Project ID.
project_name	String	Project name.

- Example normal response

```
{
  "instance_dr_relations": [
    {
      "instance_id": "b5e2c7fcef8b4c2f8fd8d80d73344756in03",
      "master_instance": {
        "instance_id": "fab4e3df67c24aa0a5b41bc2bcb41918in03",
        "region": "aRegion",
        "project_id": "08fd4e669e00d57d2ffec01352c7cb77",
        "project_name": "masterProjectName"
      }
    },
    {
      "instance_id": "fab4e3df67c24aa0a5b41bc2bcb41918in03",
      "slave_instances": [
        {
          "instance_id": "b5e2c7fcef8b4c2f8fd8d80d73344756in03",
          "region": "bRegion",
          "project_id": "054b61972980d4552f0bc00ac8d3f5cd",
          "project_name": "slaveProjectName"
        }
      ]
    }
  ]
}
```



```
}
  }
}
]
```

- 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](#).

5.7.7 Removing the DR Relationship from a DB Instance

Function

This API is used to remove the DR relationship from a DB instance.

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

Constraints

- Cross-cloud or cross-region DR relationships can be removed only for RDS for PostgreSQL 12 and later versions.
- The DR relationship must be removed from the DR instance first and then the primary instance. Otherwise, your DB instance may not run properly.

URI

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

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

Table 5-183 Parameters

Parameter	Mandatory	Type	Description
target_instance_id	Yes	String	ID of the target instance.
target_project_id	Yes	String	ID of the project that the target instance belongs to.
target_region	Yes	String	Region where the target instance is located.
target_ip	Yes	String	Floating IP address of the target instance.
is_master	Yes	Boolean	Whether the operation object is the primary instance. true: The operation object is the primary instance. false: The operation object is the DR instance.

Example Request

Remove the DR relationship from a DB instance.

```
DELETE https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/42d4b4fc17d144bbb3ba64a306e68c72in03/delete-disaster-recovery

{
  "target_instance_id" : "8c08eda627cc4344aca26832c87ff16cin03",
  "target_project_id" : "0ddd1dbcb3494d3dbdb614b39104760b",
  "target_region" : "cn-southwest-244",
  "target_ip" : "192.168.2.70",
  "is_master" : true
}
```

Response

- Normal response

Table 5-184 Parameters

Parameter	Type	Description
job_id	String	Taskflow ID.

- Example normal response

```
{
  "job_id": "64a5083a-d8e0-4cee-b086-5c2a776ee92d"
}
```

- 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 Security

5.8.1 Configuring SSL

Function

This API is used to configure SSL to encrypt connections.

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

Constraints

SSL cannot be configured when a DB instance is being created, rebooted, or upgraded, its specifications are being modified, or database users are being created or deleted.

This API is supported only for RDS for MySQL instances.

URI

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

Table 5-185 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-186 Parameters

Parameter	Mandatory	Type	Description
ssl_option	Yes	boolean	Definition Specifies whether to enable SSL. Constraints N/A Range true: Enable SSL. false: Disable SSL. Default Value N/A

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	Definition Task ID. Range N/A

- 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](#).

5.8.2 Changing a Database Port

Function

This API is used to change a database port.

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

Constraints

The database port cannot be changed when a DB instance is being created or rebooted, its specifications are being modified, database users are being created or deleted, or backups are being created for the DB instance.

URI

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

Table 5-187 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-188 Parameters

Parameter	Mandatory	Type	Description
port	Yes	Integer	Specifies the port number. - 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. - For RDS for SQL Server 2022 Enterprise Edition, 2022 Standard Edition, 2022 Web Edition, 2019 Enterprise Edition, 2019 Standard Edition, 2019 Web Edition, 2017 Enterprise Edition, 2017 Standard Edition, and 2017 Web Edition, the port number can be set to 1433 or 2100 to 9500 (excluding 5050, 5353, 5355, 5985, and 5986). For other editions, the port number can be set to 1433 or 2100 to 9500 (excluding 5355, 5985, and 5986).

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

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](#).

5.8.3 Changing a Security Group

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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 5-189 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-190 Parameters

Parameter	Mandatory	Type	Description
security_group_id	Yes	String	Security group ID. You can add multiple security group IDs for each instance and separate them with commas (,).

Example Request

Change the security group of a DB instance.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/security-group
{
  "security_group_id": "23423kljlj432lk0sdf0234eaa"
}
```

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](#).

5.8.4 Changing a Floating IP Address

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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 5-191 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-192 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/dsf23fsfsae3435in01/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](#).

5.9 Backup and Restoration

5.9.1 Setting an Automated Backup Policy

Function

This API is used to set an automated backup policy.

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

URI

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

Table 5-193 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-194 Parameters

Parameter	Mandatory	Type	Description
backup_policy	Yes	Object	Specifies the backup policy objects, including the backup retention period (days) and backup start time. For details, see Table 5-195 .
reserve_backups	No	Boolean	The default value is true , indicating that automated and unsynchronized backups are retained.

Table 5-195 backup_policy field data structure description

Parameter	Mandatory	Type	Description
keep_days	Yes	Integer	Specifies the number of days to retain the generated backup files. Value range: 1–732. To extend the retention period, contact customer service. Automated backups can be retained for up to 2,562 days.

Parameter	Mandatory	Type	Description
start_time	No	String	Specifies the backup time window. Automated backups will be triggered during the backup time window. This parameter is mandatory except that the automated backup policy is disabled. The value must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format. • The HH value must be 1 greater than the hh value. • The values of mm and MM must be the same and must be set to any of the following: 00, 15, 30, or 45. Example value: • 08:15-09:15 • 23:00-00:00

Parameter	Mandatory	Type	Description
period	No	String	Specifies the backup cycle configuration. Data will be automatically backed up on the selected days every week. This parameter is mandatory except that the automated backup policy is disabled. 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.

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/dsf23fsfdae3435in01/backups/policy
{
  "backup_policy": {
    "keep_days": 7,
    "start_time": "19:00-20:00",
    "period": "1,2"
  }
}
```

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](#).

5.9.2 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 this API, learn how to [authenticate](#) it.
- 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 PostgreSQL DB instances, the retention period of automated full backups must be the same as that for automated incremental backups.
- For RDS for PostgreSQL DB instances, automated incremental backup cannot be enabled unless automated full backup is enabled first.
- For 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 PostgreSQL instances with volume snapshot backup enabled.

URI

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

Table 5-196 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-197 Parameters

Parameter	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 5-198 .

Table 5-198 policy_para field data structure description

Parameter	Mandatory	Type	Description
backup_type	Yes	String	Specifies the backup type. For RDS for SQL Server, this parameter can only be set to all . Its value can be any of the following: • auto: automated full backup • incremental: automated incremental backup • all: all backup types – RDS for MySQL: Enable automated full backup and automated incremental backup. – RDS for PostgreSQL: Enable automated full backup and automated incremental backup. – RDS for SQL Server: Enable automated full backup, automated incremental backup, and manual backup.

Parameter	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 DB instance.

PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdae3435in01/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 DB instance.

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

- Configure a cross-region backup policy for an RDS for SQL Server DB instance.

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

- Disable the cross-region backup policy for an RDS for SQL Server DB instance.

```
{
  "policy_para": {
    "backup_type": "all",
    "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](#).

5.9.3 Obtaining an Automated Backup Policy

Function

This API is used to obtain an automated backup policy.

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

URI

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

Table 5-199 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .

Parameter	Mandatory	Description
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 5-200 Parameters

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 5-201 .

Table 5-201 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.

Parameter	Type	Description
period	String	Indicates the backup cycle configuration. 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](#).

5.9.4 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 this API, learn how to [authenticate](#) it.
- 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 5-202 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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/dsfae23fsfdae3435in01/backups/offsite-policy

Response

- Normal response

Table 5-203 Parameters

Parameter	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 5-204 .

Table 5-204 policy_para field data structure description

Parameter	Type	Description
backup_type	String	Indicates the backup type. Its value can be any of the following: • auto: automated full backup • incremental: automated incremental backup • manual: manual backup (returned only for RDS for SQL Server DB instances)
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"
    }
  ]
}
```

When the automated backup policy, incremental backup policy, and manual backup policy are enabled for RDS for SQL Server DB instances:

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

```

    "backup_type": "manual",
    "destination_region": "aaa",
    "destination_project_id": "0503fd7f7580d3262fc5c001170fbab9"
  },
  {
    "keep_days": 7,
    "backup_type": "auto",
    "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](#).

5.9.5 Creating a Manual Backup

Function

This API is used to create a manual backup.

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

Constraints

- RDS for SQL Server supports batch creation of manual backups for individual databases.
- 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 5-205 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .

Request

Table 5-206 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: > ! < " & ' =
databases	No	Array of objects	List of user-created databases for partial backup. This parameter is only available for RDS for PostgreSQL and RDS for SQL Server. For details, see Table 5-207 .

Parameter	Mandatory	Type	Description
backup_database_individually	No	Boolean	Whether to back up databases individually. This parameter is available only for RDS for PostgreSQL and RDS for SQL Server. The default value is false .

Table 5-207 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 5-208 Parameters

Parameter	Type	Description
backup	Object	Indicates the backup information. For details, see Table 5-209 .

Table 5-209 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 user-created databases for partial backup. This parameter is only available for RDS for PostgreSQL and RDS for SQL Server. For details, see Table 5-207 .
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: • BUILDING: backup in progress • COMPLETED: backup completed • FAILED: backup failed • DELETING: backup being deleted
type	String	Indicates the backup type. Value: • 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](#).

5.9.6 Obtaining Backups

Function

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

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

Constraints

This API is used to query full and incremental backups of DB 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 5-210 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
backup_id	No	Definition Backup ID. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Description
backup_type	No	Definition Backup type. Constraints N/A Range • auto: automated full backup • manual: manual full backup • fragment: differential full backup • incremental: automated incremental backup (binlog backup for RDS for MySQL) Default Value N/A
status	No	Definition Backup status. Only the statuses of RDS for SQL Server full backups can be filtered. Constraints N/A Range • BUILDING: backup in progress • COMPLETED: backup completed • FAILED: backup failed Default Value N/A

Parameter	Mandatory	Description
offset	No	Definition Index offset. 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. Range An integer greater than or equal to 0 Default Value 0
limit	No	Definition Number of records to be queried. Constraints The value cannot be a negative number. Range 1-100 Default Value 100
begin_time	No	Definition Query start time. Constraints When begin_time is not empty, end_time is mandatory. 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, in the Beijing time zone, the time zone offset is shown as +0800. Default Value N/A

Parameter	Mandatory	Description
end_time	No	Definition Query end time. Constraints When end_time is not empty, begin_time is mandatory. Range The value is in the "yyyy-mm-ddThh:mm:ssZ" format and must be later than the query start time. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800. Default Value N/A

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 5-211 Parameters

Parameter	Type	Description
backups	Array of objects	Definition Indicates the backup list. For details, see Table 5-212.
total_count	Integer	Definition Indicates the total number of records. Range N/A

Table 5-212 backups field data structure description

Parameter	Type	Description
id	String	Definition Indicates the backup ID. Range N/A
name	String	Definition Indicates the backup name. Range N/A
type	String	Definition Indicates the backup type. Range • auto: automated full backup • manual: manual full backup • fragment: differential full backup • incremental: automated incremental backup (binlog backup for RDS for MySQL)
size	Long	Definition Indicates the backup size in KB. Range N/A
status	String	Definition Indicates the backup status. Range • BUILDING: backup in progress • COMPLETED: backup completed • FAILED: backup failed • DELETING: backup being deleted

Parameter	Type	Description
begin_time	String	Definition Indicates the backup start time. - For a full backup, it indicates the full backup start time. - For an RDS for MySQL incremental backup, it indicates the time when the last transaction of the last incremental backup task is committed. 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. For example, in the Beijing time zone, the time zone offset is shown as +0800.
end_time	String	Definition Indicates the backup end time. - 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. 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. For example, in the Beijing time zone, the time zone offset is shown as +0800.
datastore	Object	Definition Indicates the database version. For details, see Table 5-213.
databases	Array of objects	Definition Indicates a list of self-built Microsoft SQL Server databases that support partial backups. For details, see Table 5-214.

Parameter	Type	Description
instance_id	String	Definition Indicates the ID of the DB instance for which the backup is created. Range N/A
associated_with_ddm	Boolean	Definition Indicates whether this instance is associated with a DDM instance. Range • false: The instance is not associated with any DDM instance. • true: The instance is associated with a DDM instance.

Table 5-213 datastore field data structure description

Parameter	Type	Description
type	String	Definition Indicates the DB engine. Range The value is case-insensitive. • MySQL • PostgreSQL • SQLServer
version	String	Definition Indicates the database version. Range N/A

Table 5-214 databases field data structure description

Parameter	Type	Description
name	String	Definition Indicates the name of the self-built database. Range N/A

- 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": "a48e43ff268f4c0e879652d65e63d0fb04",
  "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](#).

5.9.7 Querying Cross-Region Backups

Function

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

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

Constraints

Cross-region manual backups can be queried only for RDS for SQL Server.

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 5-215 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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: auto: indicates automated full backups and manual backups. Cross-region manual backups are supported only for RDS for SQL Server. incremental: indicates automated incremental backups.
backup_id	No	Specifies the backup ID.
offset	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	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. For example, in the Beijing time zone, the time zone offset is shown as +0800 . NOTE When begin_time is not empty, end_time is mandatory.

Parameter	Mandatory	Description
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. For example, in the Beijing time zone, the time zone offset is shown as +0800. 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 5-216 Parameters

Parameter	Type	Description
backups	Array of objects	Indicates the backup list. For details, see Table 5-217 .
total_count	Integer	Indicates the total number of records.

Table 5-217 backups field data structure description

Parameter	Type	Description
id	String	Indicates the backup ID.
name	String	Indicates the backup name.

Parameter	Type	Description
type	String	Indicates the backup type. Its value can be any of the following: • auto: indicates automated full backups and manual backups. Cross-region manual backups are supported only for RDS for SQL Server. • 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: • BUILDING: backup in progress • COMPLETED: backup completed • FAILED: backup failed • DELETING: backup being deleted
databases	Array of objects	Indicates the self-built database. This parameter is returned only for RDS for SQL Server DB instances. For details, see Table 5-218.
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. For example, in the Beijing time zone, the time zone offset is shown as +0800.

Parameter	Type	Description
end_time	String	Indicates the backup end time. - 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. For example, in the Beijing time zone, the time zone offset is shown as +0800 .
datastore	Object	Indicates the database version. For details, see Table 5-219 .
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 5-218 databases field data structure description

Parameter	Type	Description
name	String	Indicates the name of the self-built database.

Table 5-219 datastore field data structure description

Parameter	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": "9.6"
    },
    "instance_id": "a48e43ff268f4c0e879652d65e63d0fbin01"
  }],
  "total_count": 1
}
```

Microsoft SQL Server:

```
{
  "backups": [
    {
      "id": "d0ea632a5c32451dbdb157ef5c2ad3ecbr04",
      "name": "sqlserver-rds-1784-20221202062025775",
      "type": "auto",
      "size": 5956,
      "status": "COMPLETED",
      "begin_time": "2022-12-02T06:20:25+0000",
      "end_time": "2022-12-02T06:24:45+0000",
      "datastore": {
        "type": "sqlserver",
        "version": "2019_SE"
      },
      "instance_id": "ad4ee2b80adb430082d8336d7da2e14din04"
    },
    {
      "id": "07d6a8ab12304f9aa3f368a6cff21ac9br04",
      "name": "backup-81f1",
      "type": "auto",
      "size": 773,
      "status": "COMPLETED",
      "begin_time": "2022-12-02T06:12:22+0000",
      "end_time": "2022-12-02T06:16:37+0000",
      "datastore": {
        "type": "sqlserver",
        "version": "2019_SE"
      },
      "instance_id": "ad4ee2b80adb430082d8336d7da2e14din04"
    }
  ],
  "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](#).

5.9.8 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 this API, learn how to [authenticate](#) it.
- 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 5-220 Parameters

Parameter	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 5-221 Parameters

Parameter	Type	Description
offsite_backup_instances	Array of objects	Indicates information about DB instances for which cross-region backups are created. For details, see Table 5-222 .
total_count	Integer	Indicates the total number of records.

Table 5-222 offsite_backup_instances field data structure description

Parameter	Type	Description
id	String	Indicates the DB instance ID.
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 5-223 .
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.
keep_days	Integer	Indicates the number of days to retain cross-region backups.

Table 5-223 datastore field data structure description

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

- Example normal response

Querying DB instance lists 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": "MySQLPostgreSQL",
      "version": "5.711"
    },
    "destination_region": "bbb",
    "destination_project_id": "0503fd7f7580d3262fc5c001170fbab9",
    "keep_days": 7
  }
]
```

- **Querying all DB instance lists:**

```
{
  "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": "MySQLPostgreSQL",
      "version": "5.711"
    },
    "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](#).

5.9.9 Obtaining the Link for Downloading a Backup

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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 5-224 Parameters

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

Parameter	Mandatory	Description
backup_id	Yes	Definition Specifies the backup ID. For details about how to obtain the backup ID, see Obtaining Backups . Constraints N/A Range N/A Default Value N/A

Request

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

Response

- Normal response

Table 5-225 Parameters

Parameter	Type	Description
files	Array of objects	Definition Indicates the list of backup files. For details, see Table 5-226 .
bucket	String	Definition Indicates the name of the bucket where the file is located. Range N/A

Table 5-226 files field data structure description

Parameter	Type	Description
name	String	Definition Indicates the file name. Range N/A
size	Long	Definition Indicates the file size in KB. Range N/A
download_link	String	Definition Indicates the link for downloading the backup file. Range N/A
link_expired_time	String	Definition 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. For example, in the Beijing time zone, the time zone offset is shown as +0800 . Range N/A
database_name	String	Definition Indicates the name of the database. - For RDS for SQL Server, the database name is returned if the backup file to be downloaded is a database-level backup. Otherwise, no value is returned. - For other engines, if the backup file is not a database-level backup, no value is returned. 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": "2018-08-01T10:15:14+0800",
      "database_name": "rdsbucket"
    }
  ],
  "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](#).

5.9.10 Deleting a Manual Backup

Function

This API is used to delete a manual backup.

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

URI

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

Table 5-227 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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](#).

5.9.11 Querying the Restoration Time Range

Function

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

If the backup retention period has been set to a long period, you are advised to set the query date by referring to [Table 5-228](#).

- Before calling this API, learn how to [authenticate](#) it.
- 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 5-228 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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
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 5-229 Parameters

Parameter	Type	Description
restore_time	Array of objects	Indicates the list of restoration time ranges. For details, see Table 5-230 .

Table 5-230 restore_time field data structure description

Parameter	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.
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](#).

5.9.12 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.

If the backup retention period has been set to a long period, you are advised to set the query date by referring to [Table 5-231](#).

- Before calling this API, learn how to [authenticate](#) it.

- 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 5-231 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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/dsf23fsfdae3435in01/offsite-restore-time
 - Querying the restoration time range of a cross-region backup based on a
specified date
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/
instances/dsf23fsfdae3435in01/offsite-restore-time?date=2020-12-26

Response

- Normal response

Table 5-232 Parameters

Parameter	Type	Description
restore_time	Array of objects	Indicates the list of restoration time ranges. For details, see Table 5-233 .

Table 5-233 restore_time field data structure description

Parameter	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.
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](#).

5.9.13 Restoring Data to a New DB Instance

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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.
- For RDS for MySQL and RDS for PostgreSQL, 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 5-234 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 5-235 Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Specifies the DB instance name. DB instances of the same type can have same names under the same tenant. Valid value: • RDS for MySQL: The DB instance name must be 4 to 64 bytes 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 bytes long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), and underscores (_).

Parameter	Mandatory	Type	Description
password	No	String	Specifies the database password. If this parameter is not specified, you can reset the password after the instance is created. Valid value: 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. • RDS for MySQL allows special characters ~!@#%&^*-_+=?,
()& • RDS for SQL Server allows special characters ~!@#%&^*-_+=?,
 • RDS for PostgreSQL allows special characters ~!@#%&^*-_+=?,
 You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.

Parameter	Mandatory	Type	Description
flavor_ref	Yes	String	Specifies the specification code. The value cannot be empty. For details, see spec_code in section Querying Database Specifications .
volume	Yes	Object	Specifies the volume information. For details, see Table 5-240 .
availability_zone	Yes	String	Specifies the 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 AZ ID can be obtained from the response returned after the API in Querying Database Specifications is called.
restore_point	Yes	Object	Specifies the restoration information. For details, see Table 5-241 .

Parameter	Mandatory	Type	Description
datastore	No	Object	Specifies 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 5-237 . For details about versions for RDS for SQL Server restoration, see Table 5-238 .
ha	No	Object	Specifies the HA configuration parameters, which are used when creating primary/standby DB instances. For details, see Table 5-236 .
configuration_id	No	String	Specifies the parameter template ID.

Parameter	Mandatory	Type	Description
port	No	String	Specifies the database port information. • 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. • For RDS for SQL Server 2022 Enterprise Edition, 2022 Standard Edition, 2022 Web Edition, 2019 Enterprise Edition, 2019 Standard Edition, 2019 Web Edition, 2017 Enterprise Edition, 2017 Standard Edition, and 2017 Web Edition, the port number can be set to 1433 or 2100 to 9500 (excluding 5050, 5353, 5355, 5985, and 5986).

Parameter	Mandatory	Type	Description
			For other editions, the port number can be set to 1433 or 2100 to 9500 (excluding 5355, 5985, and 5986). If this parameter is not set, the default value is as follows: • RDS for MySQL: 3306 • RDS for PostgreSQL: 5432 • RDS for SQL Server: 1433
backup_strategy	No	Object	Specifies the advanced backup policy. For details, see Table 5-239.
enterprise_project_id	No	String	Specifies the project ID.
disk_encryption_id	No	String	Specifies the key ID for disk encryption. The default value is empty.
region	No	String	Specifies the region ID. For details, see Regions and Endpoints. This parameter is mandatory for RDS for SQL Server and RDS for PostgreSQL.

Parameter	Mandatory	Type	Description
vpc_id	No	String	Specifies the VPC ID. To obtain this parameter value, use either of the following methods: - Method 1: Log in to the VPC console and view the VPC ID on the VPC details page. - Method 2: See the "Querying VPCs" section in the <i>Virtual Private Cloud API Reference</i>. This parameter is mandatory for RDS for SQL Server and RDS for PostgreSQL.

Parameter	Mandatory	Type	Description
subnet_id	No	String	Specifies the subnet ID. To obtain this parameter value, use either of the following methods: • 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>. This parameter is mandatory for RDS for SQL Server and RDS for PostgreSQL.

Parameter	Mandatory	Type	Description
data_vip	No	String	Specifies the floating IP address of a DB instance. To obtain this parameter value, use either of the following methods: • Method 1: Log in to the VPC console and click the target subnet on the Subnets page. You can view the subnet CIDR block 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	Specifies the security group which the RDS DB instance belongs to. To obtain this parameter value, use either of the following methods: - Method 1: Log in to VPC console. Choose Access Control > Security Groups in the navigation pane. 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>. This parameter is mandatory for RDS for SQL Server. To use multiple security groups for an RDS for MySQL instance, submit a service ticket to apply for required permissions. You can add up to 10 security group IDs for each instance

Parameter	Mandatory	Type	Description
			and separate them with commas (,).
charge_info	No	Object	Specifies the billing information, which is yearly/monthly or pay-per-use (default setting). Only RDS for SQL Server supports restoration of yearly/monthly DB instances to new instances. For details, see Table 5-242 .

Parameter	Mandatory	Type	Description
time_zone	No	String	Specifies the UTC time zone. • If this parameter is not specified, the time zone of each engine is as follows: – 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
dsspool_id	No	String	Specifies the DSS pool ID of DeC users. The DSS pool configured for each AZ is different. When DeC users create DB instances other than single instances or read replicas, DSS pool IDs must be specified for all nodes of the DB instances and must be separated by commas (,). To obtain the DSS pool ID, you can use either of the following methods: • Method 1: Log in to the DSS console, view the DSS pool list, and select the desired DSS ID in the AZ. • Method 2: Query the DSS pool ID using the DSS API. For details, see Obtaining Details of DSS Storage Pools.

Parameter	Mandatory	Type	Description
collation	No	String	This parameter applies only to RDS for SQL Server DB instances. Value range: character sets queried in Querying the Available SQL Server Character Set.
tags	No	Array of objects	Specifies the tag list. Each DB instance can be associated with tag key-value pairs while being created. • <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 empty. If you want to create DB instances with multiple tag keys and values, separate them with commas (,). A maximum of 20 key-value pairs can be added for a DB instance. For details, see Table 5-243.

Parameter	Mandatory	Type	Description
dry_run	No	Boolean	Specifies whether DB instances will not be created after the request is checked. This parameter is supported with MySQL only. • true: DB instances will not be created after the request is checked. – If the check is successful, status code 202 is returned. – If the check fails, an error code is returned. For details, see Error Codes. • false: DB instances will be created after the check is successful.

Parameter	Mandatory	Type	Description
is_auto_upgrade	No	Boolean	Definition Whether to enable automatic minor version upgrade. Constraints This parameter is available only for RDS for PostgreSQL DB instances. Range • true: Automatic minor version upgrade is enabled. • false: Automatic minor version upgrade is disabled. Default Value false

Table 5-236 ha field data structure description

Parameter	Mandatory	Type	Description
mode	Yes	String	Specifies the primary/standby instance type. The value is Ha (case-insensitive).

Parameter	Mandatory	Type	Description
replication_mode	Yes	String	Specifies the replication mode for the standby DB instance. The value cannot be empty. • 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. NOTE • async indicates asynchronous replication. • semisync indicates semi-synchronous replication. • sync indicates synchronous replication.

Table 5-237 datastore field data structure description

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

Parameter	Mandatory	Type	Description
version	Yes	String	Specifies the database version. For RDS for SQL Server, only 2019 Enterprise Edition, 2019 Standard Edition, 2019 Web Edition, 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, 2014 Web Edition, and 2016 Web Edition are supported. Example value: 2014_SE 2008 R2 Enterprise Edition and 2008 R2 Web Edition are only for installed base operations. For details about supported database versions, see Querying Version Information About a DB Engine.

Table 5-238 Version mapping for RDS for SQL Server restoration

Original	Restore To
2008 R2 Standard Edition	2012 Standard Edition 2012 Enterprise Edition 2014 Standard Edition 2014 Enterprise Edition 2016 Standard Edition 2016 Enterprise Edition 2017 Standard Edition 2017 Enterprise Edition

Original	Restore To
2012 Web Edition	2012 Web Edition 2012 Standard Edition 2012 Enterprise Edition 2014 Web Edition 2014 Standard Edition 2014 Enterprise Edition 2016 Web Edition 2016 Standard Edition 2016 Enterprise Edition 2017 Web Edition 2017 Standard Edition 2017 Enterprise Edition
2012 Standard Edition	2012 Standard Edition 2012 Enterprise Edition 2014 Standard Edition 2014 Enterprise Edition 2016 Standard Edition 2016 Enterprise Edition 2017 Standard Edition 2017 Enterprise Edition
2012 Enterprise Edition	2012 Enterprise Edition 2014 Enterprise Edition 2016 Enterprise Edition 2017 Enterprise Edition
2014 Standard Edition	2014 Standard Edition 2014 Enterprise Edition 2016 Standard Edition 2016 Enterprise Edition 2017 Standard Edition 2017 Enterprise Edition
2014 Enterprise Edition	2014 Enterprise Edition 2016 Enterprise Edition 2017 Enterprise Edition
2016 Standard Edition	2016 Standard Edition 2016 Enterprise Edition 2017 Standard Edition 2017 Enterprise Edition

Original	Restore To
2016 Enterprise Edition	2016 Enterprise Edition 2017 Enterprise Edition
2017 Web Edition	2017 Web Edition 2017 Standard Edition 2017 Enterprise Edition
2017 Standard Edition	2017 Standard Edition 2017 Enterprise Edition
2017 Enterprise Edition	2017 Enterprise Edition

Table 5-239 backup_strategy field data structure description

Parameter	Mandatory	Type	Description
start_time	Yes	String	Specifies the backup time window. Automated backups will be triggered during the backup time window. The value cannot be empty. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format. - The HH value must be 1 greater than the hh value. - The values of mm and MM must be the same and must be set to any of the following: 00, 15, 30, or 45. Example value: 08:15-09:15 23:00-00:00

Parameter	Mandatory	Type	Description
keep_days	No	Integer	Specifies the 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. To extend the retention period, contact customer service. Automated backups can be retained for up to 2,562 days.

Table 5-240 volume field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	Specifies the storage type. Its value can be any of the following and is case-sensitive: ● ULTRAHIGH: ultra-high I/O storage. ● CLOUDSSD: cloud SSD storage. This storage type is supported only with general-purpose and dedicated instances. ● ESSD: extreme SSD storage.

Parameter	Mandatory	Type	Description
size	Yes	Integer	Specifies the storage space. Its value range is from 40 to 4000, in 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 for RDS for MySQL and RDS for PostgreSQL.

Table 5-241 restore_point field data structure description

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Specifies the DB instance ID.
type	Yes	String	Specifies the restoration mode. Enumerated values include: • 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.

Parameter	Mandatory	Type	Description
backup_id	No	String	Specifies the ID of the backup used to restore data. This parameter must be specified when backups are used for restoration. NOTICE When type is not mandatory, backup_id is mandatory.
restore_time	No	Integer	Specifies the time point of data restoration in the UNIX timestamp. The unit is millisecond and the time zone is UTC. NOTICE When type is mandatory, restore_time is mandatory.

Parameter	Mandatory	Type	Description
database_name	No	Map<String, String>	This parameter applies only to Microsoft SQL Server databases. • If this parameter is specified, you can restore all or specific databases and rename new databases. • If this parameter is not specified, all databases are restored by default. • You can enter multiple new database names and separate them with commas (,). The new database names can contain but cannot be the same as the original database names. • Note the following when you are specifying new database names: – New database names must be different from the original database names. If they are left

Parameter	Mandatory	Type	Description
			blank, the original database names will be used for restoration by default. - Check whether new database names are case sensitive based on the character set selected during instance creation and make sure each new database name is unique. - New database names must be different from any database names on the original DB instance. - The total number of new databases cannot exceed the database quota specified by rds_databases_quota. - New database

Parameter	Mandatory	Type	Description
			names cannot contain the following fields (case-insensitive): rdsadmin, master, msdb, tempdb, model, and resource. - New database names must consist of 1 to 64 characters, including only letters, digits, underscores (_), and hyphens (-). If you want to restore data to multiple new databases, separate them with commas (,). Example: <pre>"database_name": {"Original database name": "New database name"}</pre> Correct example: <pre>"database_name": {"A": "A,A1,A2", "B": "B1,B2", "C": ""}</pre> Wrong example: <pre>"database_name": {"A": "A", "B": "B1,B2", "C": "B1,C1", "D": "D1,d1"},</pre> Error causes are as follows:

Parameter	Mandatory	Type	Description
			1. The new database name (A) is the same as the original database name (A). 2. The new database name (B1) is not unique. 3. When the database name is case insensitive, the database names D1 and d1 conflict. CAUTION Before the restoration, make sure that the size of the restored data does not exceed the purchased disk capacity.

Table 5-242 charge_info field data structure description

Parameter	Mandatory	Type	Description
charge_mode	Yes	String	Specifies the billing mode. Value range: • prePaid: indicates the yearly/monthly billing mode. • postPaid: indicates the pay-per-use billing mode.

Parameter	Mandatory	Type	Description
period_type	No	String	Specifies the subscription type. Value range: • month: indicates that the service is subscribed by month. • year: indicates that the service is subscribed by year. NOTE This parameter is valid and mandatory if charge_mode is set to prePaid.
period_num	No	Integer	Specifies the subscription period. This parameter is valid and mandatory if charge_mode is set to prePaid. Value range: • When period_type is set to month, the parameter value ranges from 1 to 9. • When period_type is set to year, the parameter value ranges from 1 to 3.
is_auto_renew	No	boolean	Specifies whether automatic renewal is enabled for yearly/monthly DB instances. The renewal period is the same as the original period and the order will be automatically paid. • true: indicates that automatic renewal is enabled. • false: indicates that automatic renewal is disabled. The default value is false.
is_auto_pay	No	boolean	Specifies whether the order will be automatically paid after yearly/monthly DB instances are created. This parameter does not affect the payment mode of automatic renewal. • true: indicates the order will be automatically paid. • false: indicates the order will be manually paid. The default value is false.

Table 5-243 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> .
value	Yes	String	Tag value. It can be left blank or contain a maximum of 255 Unicode characters, including letters, digits, spaces and special characters <code>._:=-@</code> .

Example Request

- Restore a MySQL 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": "CLOUDSSD",
    "size": 40
  },
  "region": "aaa",
  "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
  "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
  "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
  "data_vip": "192.168.0.147",
  "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",
  "enterprise_project_id": "ba1f7fc8-3307-42a7-aa6f-42c8b9b8f85c",
  "time_zone": "UTC+04:00",
  "restore_point": {
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01",
    "type": "backup",
    "backup_id": "2f4ddb93-b901-4b08-93d8-1d2e472f30fe"
  }
}
```

- Restore some databases to a new DB instance from an RDS for SQL Server backup.

```
{
  "name": "targetInst",
  "datastore": {
    "type": "SQLServer",
    "version": "2014_SE"
  },
}
```

```

"availability_zone": "bbb,ccc",
"ha": {
  "mode": "ha",
  "replication_mode": "sync"
},
"flavor_ref": "rds.mssql.2014.se.s3.xlarge.2.ha",
"volume": {
  "type": "ULTRAHIGH",
  "size": 40
},
"disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
"vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
"subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
"data_vip": "192.168.0.147",
"security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
"backup_strategy": {
  "keep_days": 2,
  "start_time": "19:00-20:00"
},
"charge_info": {
  "charge_mode": "prePaid",
  "period_type": "month",
  "period_num": 1,
  "is_auto_renew": false,
  "is_auto_pay": true
},
"password": "Demo@12345678",
"configuration_id": "52e86e87445847a79bf807ceda213165pr04",
"enterprise_project_id": "ba1f7fc8-3307-42a7-aa6f-42c8b9b8f85c",
"time_zone": "UTC+04:00",
"collation": "Cyrillic_General_CI_AS",
"restore_point": {
  "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cf1n04",
  "type": "backup",
  "backup_id": "2f4ddb93-b901-4b08-93d8-1d2e472f30fe",
  "database_name": {
    "db1": "dbtest1,dbtest2",
    "db2": "db2,db002",
    "db3": ""
  }
}
}

```

- Restore data of an RDS for MySQL instance 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": "CLOUDSSD",
    "size": 40
  },
  "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
  "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
  "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
  "security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
  "data_vip": "192.168.0.147",
  "backup_strategy": {
    "keep_days": 2,
    "start_time": "19:00-20:00"
  },
  "password": "Demo@12345678",
  "configuration_id": "52e86e87445847a79bf807ceda213165pr01",
  "enterprise_project_id": "ba1f7fc8-3307-42a7-aa6f-42c8b9b8f85c",
  "time_zone": "UTC+04:00",
  "restore_point": {

```

```

        "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01",
        "type": "timestamp",
        "restore_time": 1532001446987
    }
}

```

- Restore some databases of an RDS for SQL Server instance to a specific point in time.

```

{
    "name": "targetInst",
    "datastore": {
        "type": "SQLServer",
        "version": "2014_SE"
    },
    "availability_zone": "bbb,ccc",
    "ha": {
        "mode": "ha",
        "replication_mode": "sync"
    },
    "flavor_ref": "rds.mssql.2014.se.s3.xlarge.2.ha",
    "volume": {
        "type": "ULTRAHIGH",
        "size": 40
    },
    "disk_encryption_id": "2gfdsh-844a-4023-a776-fc5c5fb71fb4",
    "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
    "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
    "data_vip": "192.168.0.147",
    "security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
    "backup_strategy": {
        "keep_days": 2,
        "start_time": "19:00-20:00"
    },
    "charge_info": {
        "charge_mode": "prePaid",
        "period_type": "month",
        "period_num": 1,
        "is_auto_renew": false,
        "is_auto_pay": true
    },
    "password": "Demo@12345678",
    "configuration_id": "52e86e87445847a79bf807ceda213165pr04",
    "enterprise_project_id": "ba1f7fc8-3307-42a7-aa6f-42c8b9b8f85c",
    "time_zone": "UTC+04:00",
    "collation": "Cyrillic_General_CI_AS",
    "restore_point": {
        "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin04",
        "type": "timestamp",
        "restore_time": 1532001446987,
        "database_name": {
            "db1": "dbtest1,dbtest2",
            "db2": "db2,db02",
            "db3": ""
        }
    }
}

```

Response

- Normal response

Table 5-244 Parameters

Parameter	Type	Description
instance	Object	Indicates the DB instance information. For details, see Table 5-245 .
job_id	String	Indicates the 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.
order_id	String	Indicates the order ID. This parameter is returned only for the creation of an RDS for SQL Server DB instance billed on the yearly/ monthly basis.

Table 5-245 instance description

Parameter	Type	Description
id	String	Indicates the DB instance ID.
name	String	Indicates the DB instance name. DB instances of the same type can have same names under the same tenant.
status	String	Indicates the DB instance status. For example, BUILD indicates that the DB instance is being created.
datastore	Object	Indicates the database information. For details, see Table 5-246 .

Parameter	Type	Description
ha	Object	Indicates the HA configuration parameters. This parameter is returned only when primary/standby DB instances are created. For details, see Table 5-247 .
configuration_id	String	Indicates the parameter template ID. This parameter is returned only when a custom parameter template is used during DB instance creation.

Parameter	Type	Description
port	String	Indicates the database port information. • 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. • For RDS for SQL Server 2022 Enterprise Edition, 2022 Standard Edition, 2022 Web Edition, 2019 Enterprise Edition, 2019 Standard Edition, 2019 Web Edition, 2017 Enterprise Edition, 2017 Standard Edition, and 2017 Web Edition, the port number can be set to 1433 or 2100 to 9500 (excluding 5050, 5353, 5355, 5985, and 5986). For other editions, the port number can be set to 1433 or 2100 to 9500 (excluding 5355, 5985, and 5986). If this parameter is not set, the default value is as follows: • RDS for MySQL: 3306 • RDS for PostgreSQL: 5432 • RDS for SQL Server: 1433

Parameter	Type	Description
backup_strategy	Object	Indicates the automated backup policy. For details, see Table 5-248 .
enterprise_project_tag	String	Indicates the project ID.
flavor_ref	String	Indicates the specification ID. For details, see spec_code in Table 5-13 in section Querying Database Specifications .
volume	Object	Indicates the volume information. For details, see Table 5-249 .
region	String	Indicates the region ID.
availability_zone	String	Indicates the AZ ID.
vpc_id	String	Specifies the VPC ID. To obtain this parameter value, use either of the following methods: - Method 1: Log in to the VPC console and view the VPC ID on the VPC details page. - Method 2: See the "Querying VPCs" section in the <i>Virtual Private Cloud API Reference</i>.

Parameter	Type	Description
subnet_id	String	Specifies the network ID. To obtain this parameter value, use either of the following methods: - 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	String	Indicates the security group which the RDS DB instance belongs to. To obtain this parameter value, use either of the following methods: - Method 1: Log in to VPC console. Choose Access Control > Security Groups in the navigation pane. 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	Indicates the collation for RDS for SQL Server.

Parameter	Type	Description
charge_info	Object	Indicates the billing information, which is yearly/monthly or pay-per-use. For details, see Table 5-242 .

Table 5-246 datastore field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	Indicates the DB engine. Its value can be any of the following and is case-insensitive: - MySQL - PostgreSQL - SQLServer
version	Yes	String	Indicates the database version. For details about supported database versions, see section Querying Version Information About a DB Engine .
complete_version	No	String	Indicates the complete version number. This parameter is returned only when the DB engine is PostgreSQL.

Table 5-247 ha field data structure description

Parameter	Mandatory	Type	Description
mode	Yes	String	Indicates the primary/standby instance type. The value is Ha .
replication_mode	Yes	String	Indicates the replication mode for the standby DB instance. The value cannot be empty. • 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. NOTE • async indicates the asynchronous replication mode. • semisync indicates the semi-synchronous replication mode. • sync indicates the synchronous replication mode.

Table 5-248 backupStrategy field data structure description

Parameter	Mandatory	Type	Description
start_time	Yes	String	Indicates the backup time window. Automated backups will be triggered during the backup time window. The value cannot be empty. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format. • The HH value must be 1 greater than the hh value. • The values of mm and MM must be the same and must be set to any of the following: 00, 15, 30, or 45. Example value: • 08:15-09:15 • 23:00-00:00

Parameter	Mandatory	Type	Description
keep_days	No	Integer	Indicates the 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. To extend the retention period, contact customer service. Automated backups can be retained for up to 2,562 days.

Table 5-249 volume field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	Specifies the volume type. Its value can be any of the following and is case-sensitive: ● ULTRAHIGH: ultra-high I/O storage. ● CLOUDSSD: cloud SSD storage. This storage type is supported only with general-purpose and dedicated instances. ● ESSD: extreme SSD storage.

Parameter	Mandatory	Type	Description
size	Yes	Integer	Indicates the volume size. Its value range is from 40 to 4000, in 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": "CLOUDSSD",
      "size": "40"
    },
    "region": "aaa",
    "backup_strategy": {
      "start_time": "02:00-03:00",
      "keep_days": "7"
    },
    "flavor_ref": "rds.mysql.s1.large",
    "availability_zone": "bbb",
    "vpc_id": "19e5d45d-70fd-4a91-87e9-b27e71c9891f",
    "subnet_id": "bd51fb45-2dc4-4296-8783-8623bfe89bb7",
    "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": "9.6.13"
    },
    "port": "5432",
    "volume": {
      "type": "CLOUDSSD",
      "size": "40"
    },
    "region": "aaa",
    "backup_strategy": {
      "start_time": "02:00-03:00",
      "keep_days": "7"
    },
    "flavor_ref": "rds.pg.s1.large",
    "availability_zone": "bbb",
    "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"
    },
    "region": "aaa",
    "backup_strategy": {
      "start_time": "02:00-03:00",
      "keep_days": "7"
    },
    "flavor_ref": "rds.mssql.2014.se.s3.large.2",
    "availability_zone": "bbb",
    "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](#).

5.9.14 Stopping a Backup (RDS for PostgreSQL)

Function

This API is used to stop a backup for a DB instance.

- Before calling this API, learn how to [authenticate](#) it.

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

URI

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

Table 5-250 Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	String	Instance ID.

Request

- Parameter description
None
- Example request
POST `https://{Endpoint}/v3/8b3d99b2fb1148c69be8fe37bb896f27/instances/51986c9a48df43839a3ba300d6c5e91fin03/backups/stop`

Response

- Normal response

Table 5-251 Parameters

Parameter	Type	Description
job_id	String	Workflow ID.

- Example normal response

```
{
  "job_id": "27b449ae-3d7c-6485-fc59-0ff2c8d9d8c8"
}
```
- 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](#).

5.9.15 Checking Whether Fast Restoration Can Be Used for Restoring Databases or Tables (RDS for MySQL)

Function

This API is used to check whether fast restoration can be used for restoring databases or tables of a DB instance.

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

Constraints

- This API is available to RDS for MySQL only.
- Fast restoration is disabled by default. To use this function, contact customer service.

URI

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

Table 5-252 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .

Request

Table 5-253 Parameters

Parameter	Mandatory	Type	Description
restore_time	Yes	String	Time point to which data is to be restored. The format is yyyy-mm-ddThh:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 .
instance_ids	Yes	Array of strings	Instance IDs.

Example Request

Check whether fast restoration can be used for restoring databases or tables of a DB instance.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/fast-restore
{
  "restore_time" : "2023-06-25T11:35:40+0800",
  "instance_ids" : [ "14fc6c06d7e842829ee91d11c6b88b3ain01" ]
}
```

Response

- Normal response

Table 5-254 Response body parameters

Parameter	Type	Description
support_fast_restore_list	Array of objects	Whether fast restoration is supported for the DB instance. For details, see Table 5-255 .

Table 5-255 support_fast_restore_list field data structure description

Parameter	Type	Description
instance_id	String	Instance ID.

Parameter	Type	Description
is_support_fast_table_restore	Boolean	Whether fast restoration can be used for restoring tables.
is_support_fast_database_restore	Boolean	Whether fast restoration can be used for restoring databases.

- Example normal response

```
{
  "support_fast_restore_list" : [ {
    "instance_id" : "14fc6c06d7e842829ee91d11c6b88b3ain01",
    "is_support_fast_table_restore" : true,
    "is_support_fast_database_restore" : 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](#).

5.9.16 Querying Tables That Can Be Restored to a Specified Point in Time (RDS for PostgreSQL)

Function

This API is used to query tables that can be restored to a specified point in time.

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

URI

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

Table 5-256 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
database_name	Yes	DB engine. The value is postgresql (case-insensitive).

Request

- Parameter description

Table 5-257 Parameters

Parameter	Mandatory	Type	Description
instance_ids	Yes	Array of strings	Instance IDs.
restore_time	Yes	Long	Restoration time point.
database_name_like	No	String	Database name, which can be used for fuzzy search.
table_name_like	No	String	Table name, which can be used for fuzzy search.
instance_name_like	No	String	Instance name, which can be used for fuzzy search.

- Example request

```
POST https://{endpoint}/v3/4879de6859e345c780f1a22d8bc6f229/postgresql/instances/history/tables
{
  "instance_ids": [ "f9e0b25a7b984a5cb193bebc98029914in03" ],
  "restore_time": 1688554112000,
  "database_name_like": "",
  "table_name_like": "",
  "instance_name_like": ""
}
```

Response

- Normal response

Table 5-258 Parameters

Parameter	Type	Description
table_limit	Integer	Maximum number of tables that can be restored.

Parameter	Type	Description
instances	Array of objects	Instance information. For details, see Table 5-259 .

Table 5-259 Data structure of the instances field

Parameter	Type	Description
id	String	Instance ID.
name	String	Instance name.
total_tables	Integer	Number of tables that can be restored.
databases	Array of objects	Database information. For details, see Table 5-260 .

Table 5-260 Data structure of the databases field

Parameter	Type	Description
name	String	Database name.
total_tables	Integer	Number of tables that can be restored.
schemas	Array of objects	Schema information. For details, see Table 5-261 .

Table 5-261 Data structure of the schemas field

Parameter	Type	Description
name	String	Schema name.
total_tables	Integer	Number of tables that can be restored.
tables	Array of objects	Table information. For details, see Table 5-262 .

Table 5-262 Data structure of the tables field

Parameter	Type	Description
name	String	Table name.

- Example normal response

```
{
  "instances": [ {
    "id": "70f639ffa8e343e1b7797c1705d4fe71in03",
    "name": "rds-e1c8",
    "databases": [ {
      "name": "db1",
      "schemas": [ {
        "name": "public",
        "tables": [ {
          "name": "tb1"
        } ],
        "total_tables": 1
      }, {
        "name": "schema1",
        "tables": [ {
          "name": "tb1"
        } ],
        "total_tables": 1
      } ],
      "total_tables": 2
    } ],
    "total_tables": 2
  } ],
  "table_limit": 2000
}
```

- 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](#).

5.9.17 Querying Databases That Can Be Restored to a Specified Point in Time

Function

This API is used to query databases that can be restored to a specified point in time.

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

Constraints

This API is only available to RDS for MySQL and RDS for PostgreSQL.

URI

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

Table 5-263 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
engine	Yes	DB engine. The value can be mysql or postgresql (case-insensitive).

Request

Table 5-264 Parameters

Parameter	Mandatory	Type	Description
instance_ids	Yes	Array of strings	Instance IDs.
restore_time	Yes	Long	Restoration time point. A timestamp in milliseconds is used.
database_name_like	No	String	Database name, which can be used for fuzzy query. The database name cannot contain Chinese characters.
instance_name_like	No	String	Instance name, which can be used for fuzzy query.

Example Request

Query the databases that can be restored to a specified point in time of an RDS for MySQL instance.

```
{
  "instance_ids": [ "5d742eda6e574ff3a003191638ef8c51in01" ],
  "restore_time": 1688554422000,
  "database_name_like": "",
  "instance_name_like": ""
}
```

Response

- Normal response

Table 5-265 Parameters

Parameter	Type	Description
database_limit	Integer	Maximum number of databases that can be restored for a single instance. If the number of databases queried exceeds this limit, only the databases within this limit are returned in the response.
table_limit	Integer	Maximum number of tables in all databases that can be restored for a single instance. If the number of tables queried exceeds this limit, only the databases whose total number of tables is within this limit are returned in the response.
instances	Array of objects	Instance information. For details, see Table 5-266 .

Table 5-266 Data structure of the instances field

Parameter	Type	Description
id	String	Instance ID.
name	String	Instance name.
total_tables	Integer	Total number of tables in all restorable databases of the instance. This value cannot exceed the value of table_limit .
databases	Array of objects	Database information. For details, see Table 5-267 .

Table 5-267 Data structure of the databases field

Parameter	Type	Description
name	String	Database name.

Parameter	Type	Description
total_tables	Integer	Total number of tables in the database. This value cannot exceed the value of table_limit .

- Example normal response

Querying databases that can be restored to a specified point in time:

```
{
  "instances": [
    {
      "id": "5d742eda6e574ff3a003191638ef8c51in01",
      "name": "AUTO-GENERATED-INSTANCE-57-HA-LOCALSSD",
      "databases": [
        {
          "name": "dbtest",
          "total_tables": 1
        },
        {
          "name": "dbtest_restore",
          "total_tables": 1
        }
      ],
      "total_tables": 2
    }
  ],
  "database_limit": 2000,
  "table_limit": 20000
}
```

- 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](#).

5.9.18 Restoring Tables to a Specified Point in Time (RDS for PostgreSQL)

Function

This API is used to restore tables of a DB instance to a point in time.

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

URI

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

Table 5-268 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .

Request

- Parameter description

Table 5-269 Parameters

Parameter	Mandatory	Type	Description
instances	No	Array of objects	Table information. For details, see Table 5-270 .

Table 5-270 Data structure of the instances field

Parameter	Mandatory	Type	Description
restore_time	No	Long	Point in time to which the tables are restored.
instance_id	No	String	Instance ID.
databases	No	Array of objects	Database information. For details, see Table 5-271 .

Table 5-271 Data structure of the databases field

Parameter	Mandatory	Type	Description
database	No	String	Database name.
schemas	No	Array of objects	Schema information For details, see Table 5-272 .

Table 5-272 Data structure of the schemas field

Parameter	Mandatory	Type	Description
schema	No	String	Schema information.
tables	No	Array of objects	Table information. For details, see Table 5-273 .

Table 5-273 Data structure of the tables field

Parameter	Mandatory	Type	Description
old_name	No	String	Original table name before the restoration.
new_name	No	String	Table name after the restoration.

- Example request

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

```
{
  "instances": [{
    "restore_time": 1688556737000,
    "instance_id": "df29b535eec64ee1b286bd2c62871a9cin03",
    "databases": [{
      "database": "data1",
      "schemas": [{
        "schema": "schema1",
        "tables": [{
          "old_name": "table1",
          "new_name": "table1_1688556737000"
        }]
      }]
    }]
  }]
}
```

Response

- Normal response

Table 5-274 Parameters

Parameter	Type	Description
restore_result	Array of objects	Table information. For details, see Table 5-275 .

Table 5-275 Data structure of the restore_result field

Parameter	Type	Description
instance_id	String	Instance ID.
job_id	String	Workflow ID.

- Example normal response

```
{
  "restore_result": [ {
    "instance_id": "df29b535eec64ee1b286bd2c62871a9cin03",
    "job_id": "749d6254-f4f0-4f72-aa32-876e220d2496"
  } ]
}
```

- 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](#).

5.9.19 Restoring Databases to a Specified Point in Time

Function

This API is used to restore databases to a specified point in time.

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

Constraints

- This API is available to RDS for MySQL and RDS for PostgreSQL only.
- Database-level restoration is not supported for databases that contain tables with JSON virtual columns.
- Database-level restoration is not supported for databases whose names contain Chinese characters.
- Fast restoration is not supported for XA transactions.

URI

- URI format

POST /v3/{project_id}/instances/batch/restore/databases

- Parameter description

Table 5-276 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .

Request

Table 5-277 Parameters

Parameter	Mandatory	Type	Description
instances	Yes	Array of objects	Instance information. For details, see Table 5-278 .

Table 5-278 instances field data structure description

Parameter	Mandatory	Type	Description
restore_time	Yes	Long	Restoration time point. A timestamp in milliseconds is used.
instance_id	Yes	String	Instance ID.
databases	Yes	Array of objects	Database information. For details, see Table 5-279 .

Parameter	Mandatory	Type	Description
is_fast_restore	No	Boolean	Whether to use fast restoration. The value can be true or false. - To set this parameter, check whether fast restoration is supported by referring to Checking Whether Fast Restoration Can Be Used for Restoring Databases or Tables (RDS for MySQL). If fast restoration is supported, but there are XA transactions in the DB instance, set this parameter to false to prevent data loss. - If this parameter is not specified, the system determines whether to use fast restoration based on the query result of Checking Whether Fast Restoration Can Be Used for Restoring Databases or Tables (RDS for MySQL). If fast restoration is supported, but there are XA transactions in the DB instance, set this parameter to false.

Table 5-279 databases field data structure description

Parameter	Mandatory	Type	Description
old_name	Yes	String	Name of the database before restoration.
new_name	Yes	String	Name of the database after restoration. The database name can contain letters, digits, hyphens (-), underscores (_), and dollar signs (\$). The new database name cannot be the same as the original database name.

Example Request

Restore databases of an RDS for MySQL instance to a specified point in time.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/batch/restore/databases
{
  "instances": [ {
    "instance_id": "5d742eda6e574ff3a003191638ef8c51in01",
    "restore_time": 1699323939000,
    "databases": [ {
      "old_name": "dbtest",
      "new_name": "dbtest_restore"
    } ]
  } ]
}
```

Response

- Normal response

Table 5-280 Parameters

Parameter	Type	Description
restore_result	Array of objects	Database-level PITR task details. For details, see Table 5-281 .

Table 5-281 restore_result field data structure description

Parameter	Type	Description
instance_id	String	Instance ID.
job_id	String	Workflow ID.

- Example normal response
Restoring databases of an RDS for MySQL instance to a specified point in time:

```
{
  "restore_result": [ {
    "instance_id": "5d742eda6e574ff3a003191638ef8c51in01",
    "job_id": "749d6254-f4f0-4f72-aa32-876e220d2496"
  } ]
}
```

- 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](#).

5.9.20 Querying Databases Contained in a Database-Level Backup (RDS for PostgreSQL)

Function

This API is used to query databases contained in a database-level backup.

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

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/database/db-table-name?
backup_id={backup_id}
- Parameter description

Table 5-282 Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints The value cannot be empty. Range N/A Default Value N/A
instance_id	Yes	String	Definition Instance ID. Constraints The value cannot be empty. Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
backup_id	Yes	String	Definition Backup ID. Constraints The value cannot be empty. Range N/A Default Value N/A

Request

None

Example Request

Query databases contained in a database-level backup.

Response

- Normal response

Table 5-283 Parameters

Parameter	Type	Description
databases	Array of objects	Definition Database information. For details, see Table 5-284 . Range N/A
database_limit	Integer	Definition Number of databases that can be restored from a backup. Range N/A
bucket_name	String	Definition OBS bucket name. Range N/A

Table 5-284 databases field description

Parameter	Type	Description
database_name	String	Definition Database name. Range N/A
backup_file_name	String	Definition Name of the backup file. Range N/A
backup_file_size	Long	Definition Size of the backup file. Range N/A

- Example normal response

```
{
  "bucket_name": "bucket1",
  "databases": [
    {
      "database_name": "databases1",
      "backup_file_name": "file1",
      "backup_file_size": 10
    },
    {
      "database_name": "databases2",
      "backup_file_name": "file2",
      "backup_file_size": 11
    },
    {
      "database_name": "databases3",
      "backup_file_name": "file3",
      "backup_file_size": 12
    }
  ],
  "database_limit": 50
}
```

- 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](#).

5.9.21 Transferring Backups to an OBS Bucket (RDS for MySQL)

Function

This API is used to transfer backups of a DB instance to an OBS bucket.

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

URI

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

Table 5-285 Parameters

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

Request

Table 5-286 Parameters

Parameter	Mandatory	Type	Description
backups	Yes	Array of String	Definition List of backup IDs. Constraints N/A Range The minimum number of elements in backups is 1, and each element must be unique. Default Value N/A
instance_id	Yes	String	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
destination	Yes	String	Definition Name of the destination OBS bucket. Constraints N/A Range 0 to 128 characters Default Value N/A

Parameter	Mandatory	Type	Description
prefix	No	String	Definition Prefix of the storage location in the destination OBS bucket. Constraints N/A Range The value can contain 0 to 128 characters and must end with a slash (/). Default Value N/A

Example Request

Transfer backups of a DB instance to an OBS bucket.

```
POST https://{Endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
e38d120bb5a640519fb2a1613140afd9in01/backups/transfer

{
  "instance_id": "9addef3bcf264a8a82e710d62b3f1439in01",
  "backups": [
    "38e7f95bc332408e9b4d6409fc28f9a0br01"
  ],
  "destination": "obs-test",
  "prefix": "test/"
}
```

Response

- Normal response

Table 5-287 Parameters

Parameter	Type	Description
results	Array of objects	Definition Transfer task results. For details, see Table 5-288 .

Table 5-288 results field description

Parameter	Type	Description
backup_id	String	Definition Backup ID. Range N/A
status	String	Definition Task submission status. Range Success: The task is successfully submitted.
job_id	String	Definition Task ID. Range N/A

- Example normal response

```
{
  "results": [
    {
      "backupId": "38e7f95bc332408e9b4d6409fc28f9a0br01",
      "status": "Success",
      "jobId": "9b0b2a50-e2ea-468a-90ce-a777217b7570"
    }
  ]
}
```

- 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](#).

5.9.22 Querying Transfer Tasks (RDS for MySQL)

Function

This API is used to query transfer tasks of a DB instance.

- Before calling this API, learn how to [authenticate](#) it.

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

URI

- URI format
GET /v3/{project_id}/transfer-info
- Parameter description

Table 5-289 Parameters

Parameter	Mandato ry	Type	Description
project_id	Yes	String	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
offset	Yes	Integer	Definition Page number. Constraints N/A Range The minimum value is 1 , indicating that the first page is queried. Default Value 1
limit	Yes	Integer	Definition Number of records displayed on each page. Constraints N/A Range Minimum value: 0 Default Value 10

Table 5-290 Parameters

Parameter	Mandatory	Type	Description
order_field	No	String	Definition Sorting field. Constraints N/A Range N/A Default Value N/A
order_rule	No	String	Definition Sorting rule. Constraints N/A Range N/A Default Value N/A
filter_field	No	String	Definition Filter fields. Constraints N/A Range N/A Default Value N/A
filter_content	No	String	Definition Filter keywords. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
begin_time	No	Long	Definition Start timestamp. Constraints N/A Range N/A Default Value N/A
end_time	No	Long	Definition End timestamp. Constraints N/A Range N/A Default Value N/A
transfer_type	No	String	Definition Type of transfer tasks. Constraints N/A Range manual: manual transfer task auto: automatic transfer task Default Value manual

Request

None

Example Request

Query transfer tasks of a DB instance.

```
GET https://{Endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/transfer-info
```

Response

- Normal response

Table 5-291 Parameters

Parameter	Type	Description
total	Long	Definition Number of tasks. Range N/A
transfer_list	Array of objects	Definition Task list. For details, see Table 5-292 .

Table 5-292 transfer_list field description

Parameter	Type	Description
id	String	Definition Backup ID. Range N/A
name	String	Definition Backup name. Range N/A
begin_time	Long	Definition Task start time. Range N/A
end_time	Long	Definition Task end time. Range N/A
status	String	Definition Task status. Range N/A
size	Double	Definition Object size, in KB. Range N/A

Parameter	Type	Description
instance_id	String	Definition Instance ID. Range N/A
file_name	String	Definition Name of the object to be transferred. Range N/A
destination	String	Definition Destination bucket name. Range N/A
backup_begin_time	Long	Definition Start time for a backup transfer. Range N/A
backup_end_time	Long	Definition End time for a backup transfer. Range N/A
transfer_type	String	Definition Type of a transfer task. Range • manual: manual transfer task • auto: automatic transfer task
type	String	Definition Type of backups to be transferred. Range • db: automated backup • log: incremental backup • snapshot: manual backup

Parameter	Type	Description
prefix	String	Definition Prefix of the transfer destination. Range The value can contain 0 to 128 characters and must end with a slash (/).

- Example normal response

```
{
  "total":3,
  "transfer_list":[
    {
      "id":"38e7f95bc332408e9b4d6409fc28f9a0br01",
      "name":"mysql-local-adf1-20250305072705950",
      "begin_time":1741171386518,
      "end_time":1741171389039,
      "status":"Completed",
      "size":3607.899415,
      "instance_id":"9addef3bcf264a8a82e710d62b3f1439in01",
      "file_name":"test/
0cf6f193231e41feac6deabbf6620274_9addef3bcf264a8a82e710d62b3f1439in01_Db_38e7f95bc332408
e9b4d6409fc28f9a0br01_20250305072659001_20250305072705879_2c6b7a6bd85b4a4596673e37acc7
32deno01_xbcloud_qp/
0cf6f193231e41feac6deabbf6620274_9addef3bcf264a8a82e710d62b3f1439in01_Db_38e7f95bc332408
e9b4d6409fc28f9a0br01_20250305072659001_20250305072705879_2c6b7a6bd85b4a4596673e37acc7
32deno01_xbcloud_qp",
      "destination":"obs-4144"
    },
    {
      "id":"38e7f95bc332408e9b4d6409fc28f9a0br01",
      "name":"mysql-local-adf1-20250305072705950",
      "begin_time":1741171082762,
      "end_time":1741171087592,
      "status":"Completed",
      "size":3607.899415,
      "instance_id":"9addef3bcf264a8a82e710d62b3f1439in01",
      "file_name":"0cf6f193231e41feac6deabbf6620274_9addef3bcf264a8a82e710d62b3f1439in01_Db_38e7
f95bc332408e9b4d6409fc28f9a0br01_20250305072659001_20250305072705879_2c6b7a6bd85b4a459
6673e37acc732deno01_xbcloud_qp/
0cf6f193231e41feac6deabbf6620274_9addef3bcf264a8a82e710d62b3f1439in01_Db_38e7f95bc332408
e9b4d6409fc28f9a0br01_20250305072659001_20250305072705879_2c6b7a6bd85b4a4596673e37acc7
32deno01_xbcloud_qp",
      "destination":"obs-rdtest1"
    },
    {
      "id":"38e7f95bc332408e9b4d6409fc28f9a0br01",
      "name":"mysql-local-adf1-20250305072705950",
      "begin_time":1741166966484,
      "end_time":1741166970807,
      "status":"Completed",
      "size":3607.899415,
      "instance_id":"9addef3bcf264a8a82e710d62b3f1439in01",
      "file_name":"0cf6f193231e41feac6deabbf6620274_9addef3bcf264a8a82e710d62b3f1439in01_Db_38e7
f95bc332408e9b4d6409fc28f9a0br01_20250305072659001_20250305072705879_2c6b7a6bd85b4a459
6673e37acc732deno01_xbcloud_qp/
0cf6f193231e41feac6deabbf6620274_9addef3bcf264a8a82e710d62b3f1439in01_Db_38e7f95bc332408
e9b4d6409fc28f9a0br01_20250305072659001_20250305072705879_2c6b7a6bd85b4a4596673e37acc7
32deno01_xbcloud_qp",
      "destination":"obs-rdtest1"
    }
  ]
}
```

```
]
}
```

- 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 Upgrading a Major Version

5.10.1 Querying the Target Version to Which a DB Instance Can Be Upgraded (RDS for PostgreSQL)

Function

This API is used to query the target version to which an RDS for PostgreSQL DB instance can be upgraded.

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

Constraints

- This API is available to RDS for PostgreSQL only.
- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance specifications, changing port, frozen, or abnormal.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/major-version/available-version
- Parameter description

Table 5-293 Parameters

Parameter	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	String	Yes	Instance ID.

Request

- Request parameters
None
- URI example
`https://{Endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/3aa441c4c98a4b36b100a7e3e87d17cein03/major-version/available-version`

Response

- Normal response

Table 5-294 Parameters

Parameter	Type	Description
available_versions	Array of Strings	Available versions.

- Example normal response

```
{  
  "available_versions": ["13.9", "14.4"]  
}
```
- 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 Performing a Major Version Upgrade Pre-Check for a DB Instance (RDS for PostgreSQL)

Function

This API is used to perform a health check before a major version upgrade.

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

Constraints

- This API is available to RDS for PostgreSQL only.
- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance specifications, changing port, frozen, or abnormal.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/major-version/inspection
- Parameter description

Table 5-295 Parameters

Parameter	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	String	Yes	Instance ID.

Request

- Request parameters

Table 5-296 Parameters

Parameter	Type	Mandatory	Description
target_version	String	Yes	Target version.

- URI example

```
https://{Endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/3aa441c4c98a4b36b100a7e3e87d17cein03/major-version/inspection
{
  "target_version": "14.9.0"
}
```

Response

- Normal response

Table 5-297 Parameters

Parameter	Type	Description
report_id	String	Check report ID.

- Example normal response

```
{  
  "report_id": "f7a8e35e-a14c-4e5e-b1f0-d3764e8ed8a8"  
}
```

- 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 Querying the Major Version Check Status or Upgrade Status of a DB Instance (RDS for PostgreSQL)

Function

This API is used to query the major version check status or upgrade status.

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

Constraints

- This API is available to RDS for PostgreSQL only.
- The major version check status is valid within seven days. During this period, if you modify the instance configurations, you need to check the upgrade status again.

URI

- URI format

GET /v3/{project_id}/instances/{instance_id}/major-version/status?
action={current_action}

- Parameter description

Table 5-298 Parameters

Parameter	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	String	Yes	Instance ID.
action	String	Yes	The status to be queried. • check: Check the pre-upgrade check status. • upgrade: Check the major version upgrade status.

Request

- Request parameters

None

- URI example

`https://{Endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/3aa441c4c98a4b36b100a7e3e87d17cein03/major-version/status?action=upgrade`

Response

- Normal response

Table 5-299 Parameters

Parameter	Type	Description
status	String	Major version upgrade status of the instance. • running: The pre-check or major version upgrade is in progress. • success: The pre-check or major version upgrade is successful. • failed: The pre-check or major version upgrade fails.
target_version	String	Target version.
start_time	String	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. For example, if the time zone offset is one hour, the value of Z is +0100 .

Parameter	Type	Description
check_expiration_time	String	Time when a check report expires. The format is yyyy-mm-ddThh:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100 .
detail	String	Details about the pre-check or upgrade report.

- Example normal response

```
{
  "status": "success",
  "target_version": "14.4.1",
  "start_time": "2023-03-06T02:33:49+0800",
  "check_expiration_time": "2023-03-13T02:33:49+0800",
  "detail": "2023-03-06 18:33:26 --- pg_upgrade check task
\n2023-03-06 18:34:40 --- pg_upgrade check on master:
check success "
}
```

begin
[user_check_report]User

- 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](#).

5.10.4 Querying the Major Version Upgrade Check History of a DB Instance (RDS for PostgreSQL)

Function

This API is used to query the major version upgrade check history.

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

Constraints

- This API is available to RDS for PostgreSQL only.
- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance specifications, changing port, frozen, or abnormal.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/major-version/inspection-histories?
offset={offset}&limit={limit}&order={order}&sort_field={sort_field}&target_version={target_version}&is_available={is_available}
- Parameter description

Table 5-300 Parameters

Parameter	Type	Mandator y	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	String	Yes	Instance ID.
offset	Integer	No	Index offset. 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 must be a number but cannot be a negative number.
limit	Integer	No	Number of query records. The default value is 10 . The value must be a positive integer. The minimum value is 1 and the maximum value is 100 .
order	String	No	Sorting order. • DESC: descending order • ASC: ascending order • Default value: desc
sort_field	String	No	Sorting field. • check_time: check time • expiration_time: expiration time • check_time is the default value.
target_version	String	No	Target version.
is_available	Boolean	No	Whether the check is valid. • true: valid • false: invalid

Request

- Request parameters

None

- URI example

`https://{Endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/3aa441c4c98a4b36b100a7e3e87d17cein03/major-version/inspection-histories?offset=0&limit=10`

Response

- Normal response

Table 5-301 Parameters

Parameter	Type	Description
total_count	Integer	Total number of records.
inspection_reports	Array of objects	Check report details. For details, see Table 5-302 .

Table 5-302 inspection_report field data structure description

Parameter	Type	Description
id	String	Check report ID.
check_time	String	Check 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. For example, if the time zone offset is one hour, the value of Z is +0100 .
expiration_time	String	Expiration 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. For example, if the time zone offset is one hour, the value of Z is +0100 .
target_version	String	Target version.

Parameter	Type	Description
result	String	Check results. • success: The check is successful. • failed: The check fails. • running: The check is in progress.
detail	String	Check report details.

- Example normal response

```
{
  "total_count": 1,
  "inspection_reports": [
    {
      "id": "289903e1-3006-19e9-e054-5fb7fe376552",
      "check_time": "2023-03-06T02:33:49+0800",
      "expiration_time": "2023-03-07T02:33:49+0800",
      "target_version": "14.4",
      "result": "success",
      "detail": "2023-03-06 18:33:26 --- pg_upgrade check task begin\n2023-03-06 18:34:40 --- pg_upgrade check on master: [user_check_report]User check\nsuccess"
    }
  ]
}
```

- 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 Upgrading a Major Version of a DB Instance (RDS for PostgreSQL)

Function

This API is used to upgrade a major version.

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

Constraints

- This API is available to RDS for PostgreSQL only.
- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance specifications, changing port, frozen, or abnormal.
- Before an upgrade, ensure that a valid upgrade check report is available. In the check report, the source version is the current instance version, the target version is the one contained in the request body, the check is performed within seven days, and the check result is successful.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/major-version/upgrade
- Parameter description

Table 5-303 Parameters

Parameter	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	String	Yes	Instance ID.

Request

- Request parameters

Parameter	Type	Mandatory	Description
target_version	String	Yes	Target version. It must be later than the current major version of the instance. For example, if the current major version is 12, the target version must be 13 or 14.

Parameter	Type	Mandatory	Description
is_change_private_ip	Boolean	Yes	Whether to switch the floating IP address of the source instance to the target instance. • true: After the upgrade, the floating IP address is switched to the target instance. • false: After the upgrade, the floating IP address of the source instance remains unchanged, and the target instance uses a new floating IP address.
statistics_collection_mode	String	No	Mode of collecting statistics. It is mandatory if is_change_private_ip is set to true . • before_change_private_ip: Statistics are collected before the floating IP address of the source instance is switched to the target instance. • after_change_private_ip: Statistics are collected after the floating IP address of the source instance is switched to the target instance.

- Example request

```
https://{Endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/3aa441c4c98a4b36b100a7e3e87d17cein03/major-version/upgrade
{
  "target_version": "14.6.1",
  "is_change_private_ip": true,
  "statistics_collection_mode": "before_change_private_ip"
}
```

Response

- Normal response

Table 5-304 Parameters

Parameter	Type	Description
job_id	String	Task ID.

- Example normal response

```
{
  "job_id": "3afe25b7-4523-4d3b-8236-7121be922691"
}
```

- 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 Querying the Major Version Upgrade History of a DB Instance (RDS for PostgreSQL)

Function

This API is used to query the major version upgrade history.

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

Constraints

- This API is available to RDS for PostgreSQL only.
- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance specifications, changing port, frozen, or abnormal.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/major-version/upgrade-histories?offset={offset}&limit={limit}&order={order}&sort_field={sort_field}
- Parameter description

Table 5-305 Parameters

Parameter	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .

Parameter	Type	Mandatory	Description
instance_id	String	Yes	Instance ID.
offset	Integer	No	Index offset. 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 must be a number but cannot be a negative number.
limit	Integer	No	Number of query records. The default value is 10 . The value must be a positive integer. The minimum value is 1 and the maximum value is 100 .
order	String	No	Sorting order. • DESC: descending order • ASC: ascending order • Default value: desc
sort_field	String	No	Sorting field. • start_time: specifies the start time. • end_time: specifies the end time. • start_time is the default value.

Request

- Request parameters

None

- URI example

<https://{Endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/3aa441c4c98a4b36b100a7e3e87d17cein03/major-version/upgrade-histories?offset=0&limit=10>

Response

- Normal response

Table 5-306 Parameters

Parameter	Type	Description
total_count	Integer	Total number of records.
upgrade_reports	Array of objects	Upgrade report details. For details, see Table 5-307 .

Table 5-307 upgrade_report field data structure description

Parameter	Type	Description
id	String	Upgrade report ID.
start_time	String	Upgrade 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. For example, if the time zone offset is one hour, the value of Z is +0100 .
end_time	String	Upgrade end time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100 .
src_instance_id	String	Source instance ID.
src_database_version	String	Source instance version.
dst_instance_id	String	Target instance ID.
dst_database_version	String	Target instance version.
result	String	Upgrade result. ● success: The upgrade is successful. ● failed: The upgrade fails. ● running: The upgrade is in progress.

Parameter	Type	Description
is_private_ip_changed	Boolean	Whether to switch the floating IP address of the source instance to the target instance. • true: indicates that the floating IP address of the source instance will be switched to the target instance. • false: indicates that the floating IP address of the source instance will not be switched to the target instance.
private_ip_change_time	String	Time when the floating IP address is changed. The format is yyyy-mm-ddThh:mm:ssZ. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100 .
statistics_collection_mode	String	When to collect statistics. • before_change_private_ip: Statistics are collected before the floating IP address is changed. • after_change_private_ip: Statistics are collected after the floating IP address is changed.
detail	String	Upgrade report details.

- Example normal response

```
{
  "total_count": 1,
  "upgrade_reports": [
    {
      "id": "1a8fda5a-17a6-ebc4-bf1f-97ae837f432b",
      "start_time": "2023-03-06T02:45:49+0800",
      "end_time": "2023-03-06T02:50:49+0800",
      "src_instance_id": "dccacebb7b884ee18bc5c02c918ef2b0in03",
      "src_database_version": "13.9",
      "dst_instance_id": "6b5750504be1403191c4f00e4ffaae5ein03",
      "dst_database_version": "14.6",
      "result": "success",
    }
  ]
}
```

```

        "is_private_ip_changed": true,
        "private_ip_change_time": "2023-03-06T03:10:49+0800",
        "statistics_collection_mode": "before_change_private_ip",
        "detail": "2023-03-06 18:33:26 --- pg_upgrade upgrade task      begin"
    }
}

```

- 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 Log Information Queries

5.11.1 Querying Slow Query Logs Through LTS

Function

This API is used to query slow query logs of a DB instance when Log Tank Service (LTS) is available in the current region.

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

Constraints

This API is available only to RDS for MySQL and RDS for PostgreSQL.

In RDS for MySQL slow query logs, if the length of a single line of an SQL statement exceeds 10 KB or the total number of lines exceeds 200, the SQL statement will be truncated. When you view slow query log details, the SQL statement may be incomplete after special processing and is for reference only.

URI

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

Table 5-308 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID. Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition ID of the instance to be queried. Constraints N/A Range N/A Default Value N/A

Request

Table 5-309 Parameters

Parameter	Mandatory	Type	Description
start_time	Yes	String	Definition Start time. Constraints N/A 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, in the Beijing time zone, the time zone offset is shown as +0800. The start time cannot be more than one month earlier than the current time. Default Value N/A
end_time	Yes	String	Definition End time. Constraints N/A 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, in the Beijing time zone, the time zone offset is shown as +0800. Only slow query logs generated within the past month can be queried. Default Value N/A

Parameter	Mandatory	Type	Description
type	No	String	Definition Statement type. Constraints N/A Range If this parameter is left blank, all statement types are queried. Enumerated values: • INSERT • UPDATE • SELECT • DELETE • CREATE Default Value N/A
line_num	No	String	Definition Sequence number of a log event. Constraints This parameter is not required for the first query, but is required for subsequent pagination queries. The value can be obtained from the response of the last query. Range The value of line_num should be between the values of start_time and end_time. Default Value N/A
limit	No	Integer	Definition Number of records (query results) displayed on each page. Constraints N/A Range 1-100 Default Value If this parameter is not specified, the default value 10 is used.

Parameter	Mandatory	Type	Description
search_type	No	String	Definition Search mode. This parameter is used together with line_num. Constraints N/A Range forwards: Search forwards starting from line_num. backwards: Search backwards starting from line_num. Default Value forwards
database	No	String	Definition Database name. Constraints It cannot contain special characters such as < > &. Range N/A Default Value N/A

Example Request

Query slow query logs. Each page contains 10 records.

POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/cee5265e1e5845649e354841234567dfin01/slow-logs

```
{
  "start_time":"2023-01-02T23:58:57+0000",
  "end_time":"2023-01-06T01:47:20+0000",
  "limit":10,
  "line_num":"1672908793000000000"
}
```

Response

- Normal response

Table 5-310 Parameters

Parameter	Type	Description
slow_log_list	Array of objects	Definition Slow query logs. For details, see Table 5-311 .
long_query_time	String	Definition Threshold for slow query logs. Range N/A

Table 5-311 slow_log_list field data structure description

Parameter	Type	Description
count	String	Definition Number of executions. Range N/A
time	String	Definition Execution time. Range N/A
lock_time	String	Definition Lock wait time. Only RDS for MySQL supports this parameter. Range N/A
rows_sent	String	Definition Number of sent rows. Only RDS for MySQL supports this parameter. Range N/A
rows_examined	String	Definition Number of scanned rows. Only RDS for MySQL supports this parameter. Range N/A

Parameter	Type	Description
database	String	Definition Database which slow logs belong to. If any database name contains special characters such as < > ', the special characters will be escaped. Range N/A
users	String	Definition Account. Range N/A
query_sample	String	Definition Execution syntax. By default, slow query logs are anonymized. To display them in plaintext, contact customer service. Range N/A
type	String	Definition Statement type. Range N/A
start_time	String	Definition Start time in the UTC format. Range N/A
client_ip	String	Definition IP address. Range N/A
line_num	String	Definition Sequence number of a log event. Range N/A

- Example normal response

```
{
  "slow_log_list" : [ {
    "count" : "1",
    "time" : "1.04899 s",
    "lock_time" : "0.00003 s",
    "rows_sent" : "0",
    "rows_examined" : "0",
```

```
"database" : "test_db",
"users" : "root",
"query_sample" : "INSERT INTO time_zone_name (Name, Time_zone_id) VALUES (N,
@time_zone_id);",
"type" : "INSERT",
"start_time" : "2018-08-06T10:41:14",
"client_ip" : "192.*.1",
"line_num" : "1595659490239433658"
} ],
"long_query_time" : "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](#).

5.11.2 Querying Error Logs Through LTS

Function

This API is used to query error logs of a DB instance when Log Tank Service (LTS) is available in the current region.

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

URI

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

Table 5-312 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	ID of the instance to be queried.

Request

Table 5-313 Parameters

Parameter	Mandatory	Type	Description
start_time	Yes	String	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. For example, in the Beijing time zone, the time zone offset is shown as +0800 . The start time cannot be more than one month earlier than the current time.
end_time	Yes	String	End time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 . Only error logs generated in the past month can be queried.
level	No	String	Log level. The default value is ALL . Enumerated values: • ALL • INFO • LOG • WARNING • ERROR • FATAL • PANIC • NOTE
line_num	No	String	Sequence number of a log event. This parameter is not required for the first query, but is required for subsequent pagination queries. The value can be obtained from the response of the last query. The value of line_num should be between the values of start_time and end_time .

Parameter	Mandatory	Type	Description
search_type	No	String	Search mode. The default value is forwards . This parameter is used together with line_num . The search starts from line_num and is performed forwards or backwards.
limit	No	Integer	Number of records (query results) displayed on each page. The number ranges from 1 to 100. The default value is 10 .

Example Request

Query error logs. Each page contains 10 records.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
cee5265e1e5845649e354841234567dfin01/error-logs

{
  "start_time":"2023-01-05T08:00:00+0800",
  "end_time":"2023-01-11T20:00:00+0800",
  "limit":10,
  "line_num":"1672908793000000000",
  "search_type":"forwards"
}
```

Response

- Normal response

Table 5-314 Parameters

Parameter	Type	Description
error_log_list	Array of objects	Error logs. For details, see Table 5-315 .

Table 5-315 error_log_list field data structure description

Parameter	Type	Description
time	String	Time in the UTC format.
level	String	Log level.
content	String	Error log content.
line_num	String	Sequence number of a log event.

- Example normal response

```
{
  "error_log_list" : [ {
    "time" : "2022-08-23T22:59:17Z",
    "level" : "WARNING",
    "content" : "Occur error when reading bytes from a network handler. Client actively closes the connection.",
    "line_num" : "1595659490239433658"
  } ]
}
```

- 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 (Recommended) Querying Database Error Logs

Function

This API is used to query the latest 2,000 error logs of a DB instance.

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

URI

- URI format

GET /v3/{project_id}/instances/{instance_id}/errorlog?
start_date={start_date}&end_date={end_date}

- Parameter description

Table 5-316 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the ID of the queried DB instance.

Parameter	Mandatory	Description
start_date	Yes	Start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 .
end_date	Yes	End time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 . You can only query error logs generated within a month.
offset	No	Page offset, such as 1, 2, 3, or 4. The parameter value is 1 by default if it is not specified.
limit	No	Number of records on each page. Its value range is from 1 to 100. The parameter value is 10 by default if it is not specified.
level	No	Log level. The default value is ALL . Valid values: • ALL • INFO • LOG • WARNING • ERROR • FATAL • PANIC • NOTE

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/cee5265e1e5845649e354841234567d/in01/errorlog?
offset=1&limit=10&start_date=2018-08-06T10:41:14+0800&end_date=2018-08-07T10:41:14+0800&level=ALL

Response

- Normal response

Table 5-317 Parameters

Parameter	Type	Description
error_log_list	Array of objects	Indicates detailed information. For details, see Table 5-318 .
total_record	Integer	Indicates the total number of records.

Table 5-318 error_log_list field data structure description

Parameter	Type	Description
time	String	Indicates the time in the UTC format.
level	String	Indicates the log level.
content	String	Indicates the log content.

- Example normal response

```
{
  "error_log_list": [{
    "time": "2018-12-04T14:24:42",
    "level": "WARNING",
    "content": "Occur error when reading bytes from a network handler. Client actively closes the connection."
  }, {
    "time": "2018-12-04T14:24:42",
    "level": "WARNING",
    "content": "Occur error when reading bytes from a network handler. Client actively closes the connection."
  }],
  "total_record": 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](#).

5.11.4 (Recommended) Querying Slow Query Logs

Function

This API is used to query the latest 2,000 slow query logs of a DB instance.

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

Constraints

This API is available only to RDS for MySQL and RDS for PostgreSQL.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/slowlog?
start_date={start_date}&end_date={end_date}
- Parameter description

Table 5-319 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	ID of the instance to be queried.
start_date	Yes	Start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 .
end_date	Yes	End time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 . You can only query slow query logs generated within a month.

Parameter	Mandatory	Description
offset	No	Page offset, for example, 1 , 2 , 3 , or 4 . If this parameter is not specified, the default value is 1 , indicating that data on the first page is queried. The latest 2,000 slow query logs can be queried. The value of offset multiplied by the value of limit must be no more than 2,000. For example, if the value of offset is set to 200 , and the value of limit cannot be greater than 10 .
limit	No	Number of records on each page. Its value range is from 1 to 100. The parameter value is 10 by default if it is not specified.
type	No	Statement type. If it is left blank, all statement types are queried. Valid value: • INSERT • UPDATE • SELECT • DELETE • CREATE

Request

- Request parameters

None

- URI example

GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/cee5265e1e5845649e354841234567d/in01/slowlog?
offset=1&limit=10&start_date=2018-08-06T10:41:14+0800&end_date=2018-08-07T10:41:14+0800&type=INSERT

Response

- Normal response

Table 5-320 Parameters

Parameter	Type	Description
slow_log_list	Array of objects	Indicates detailed information. For details, see Table 5-321 .

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

Table 5-321 slow_log_list field data structure description

Parameter	Type	Description
count	String	Indicates the number of executions.
time	String	Indicates the execution time.
lock_time	String	Indicates the lock wait time.
rows_sent	String	Indicates the number of sent rows.
rows_examined	String	Indicates the number of scanned rows.
database	String	Indicates the database which the slow log belongs to.
users	String	Indicates the account.
query_sample	String	Indicates the execution syntax. By default, slow query logs are anonymized. To display them in plaintext, contact customer service to add a whitelist.
type	String	Indicates the statement type.
start_time	String	Indicates the start time in the UTC format.
client_ip	String	Indicates the IP address.

- Example normal response

```
{
  "total_record": 1,
  "slow_log_list": [
    {
      "count": "1",
      "time": "1.04899 s",
      "lock_time": "0.00003 s",
      "rows_sent": "0",
      "rows_examined": "0",
      "database": "mysql",
      "users": "root",
      "query_sample": "INSERT INTO time_zone_name (Name, Time_zone_id) VALUES (N,
@time_zone_id);",
      "type": "INSERT",
      "start_time": "2018-08-06T10:41:14",
      "client_ip": "192.*.*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](#).

5.11.5 Showing Original Logs

Function

This API is used to enable or disable Show Original Log.

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

Constraints

This API is available only to RDS for MySQL and RDS for PostgreSQL.

URI

- URI format
`PUT /v3/{project_id}/instances/{instance_id}/slowlog-sensitization/{status}`
- Parameter description

Table 5-322 Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	String	ID of the instance to be queried.
status	Yes	String	Whether to enable Show Original Log. The value can be on or off . • on: Enable this function. • off: Disable this function.

Request

- Request parameters
None
- URI example
PUT https://{endpoint}/v3/054ea741f700d4a32f1bc00f5c80dd4c/instances/88a31c96daa0464482599360c34a7a6bin01/slowlog-sensitization/on

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](#).

5.11.6 Querying Slow Query Log Files (SQL Server)

Function

This API is used to query slow query log files.

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

Constraints

This API is supported only for Microsoft SQL Server.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/slowlog-files
- Parameter description

Table 5-323 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	ID of the instance to be queried.
offset	No	Index offset. 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.
limit	No	Number of records on each page. Its value range is from 1 to 100. The parameter value is 10 by default if it is not specified.

Request

- Request parameters

None

- URI example

GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/cee5265e1e5845649e354841234567dfin01/slowlog-files

Response

- Normal response

Table 5-324 Parameters

Parameter	Type	Description
list	Array of objects	Slow log file information. For details, see Table 5-325 .
total_count	Integer	Total number of files.

Table 5-325 SlowLogFile field data structure description

Parameter	Type	Description
file_name	String	File name.
file_size	String	File size in bytes.

- Example normal response

```
{
  "total_count" : 1,
  "list" : [ {
    "file_name" : "SQLTrace.trc",
    "file_size" : "1024"
  } ]
}
```

- 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](#).

5.11.7 Querying Extended Logs (RDS for SQL Server)

Function

This API is used to query extended logs of a DB instance.

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

Constraints

This API is supported only for RDS for SQL Server.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/xellog-files
- Parameter description

Table 5-326 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	ID of the instance to be queried.

Parameter	Mandatory	Description
offset	No	Index offset. 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 must be a number but cannot be a negative number.
limit	No	Number of records on each page. Its value ranges from 1 to 100. The default value is 10 .

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/cee5265e1e5845649e354841234567dfin01/xellog-files

Response

- Normal response

Table 5-327 Parameters

Parameter	Type	Description
list	Array of objects	Extended log file information. For details, see Table 5-328 .
count	Integer	Total number of files.

Table 5-328 SlowLogFile field data structure description

Parameter	Type	Description
file_name	String	File name.
file_size	String	File size in KB.

- Example normal response

```
{
  "list" : [ {
    "file_name" : "SQLTrace.xel",
    "file_size" : "1024"
  }, {
    "file_name" : "SQLTrace2.xel",
    "file_size" : "1024"
  } ],
}
```

```
"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](#).

5.11.8 Obtaining Links for Downloading Extended Logs (RDS for SQL Server)

Function

This API is used to obtain links for downloading extended logs.

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

Constraints

This API is supported only for RDS for SQL Server.

URI

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

Table 5-329 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	ID of the instance to be queried.

Request

Table 5-330 Parameters

Parameter	Mandatory	Type	Description
file_name	Yes	String	Name of the file to be downloaded. The value cannot be null or empty. It can contain only uppercase letters, lowercase letters, digits, and underscores (_) and ends with .xel. You can obtain the file name from Querying Extended Logs (RDS for SQL Server) .

Example Request

Obtain links for downloading extended logs.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
cee5265e1e5845649e354841234567dfin01/xellog-download

{
  "file_name": "sqlserver_xellog_name.xel"
}
```

Response

- Normal response

Table 5-331 Parameters

Parameter	Type	Description
list	List	List of links for downloading extended logs. For details, see Table 5-332 .
count	Integer	Number of extended log links.

Table 5-332 linkInfo field data structure description

Parameter	Type	Description
file_name	String	Name of the generated file for downloading.

Parameter	Type	Description
status	String	Generation status of the link. FINISH: The download link has been generated. EXPORTING: The file is being generated. FAILED: The log file fails to be prepared.
file_size	String	File size in KB.
file_link	String	Download link. If the link generation status is EXPORTING or FAILED , no value is returned.
create_at	String	Generation time.
update_at	String	Update time.

- Example normal response

Generating links for downloading extended logs

```
{
  "list": [
    {
      "file_name": "HkEngineEventFile_0_133337769850300000.xel",
      "status": "EXPORTING",
      "file_size": "0",
      "create_at": "2023-08-14T03:35:24+0000",
      "update_at": "2023-08-14T03:35:24+0000"
    }
  ],
  "count": 1
}
```

Links for downloading extended logs obtained successfully

```
{
  "list": [
    {
      "file_name": "HkEngineEventFile_0_133337769850300000.xel",
      "status": "SUCCESS",
      "file_size": "0",
      "file_link": "https://obs.xxx:443/xxx-7a95af72c4d54a31ae0663263f0e35ea/6e22b18b43a74e4486264194f6e09f66_EL_HkEngineEventFile_0_133337769850300000.xel?xxx",
      "create_at": "2023-08-14T03:35:41+0000",
      "update_at": "2023-08-14T03:35:41+0000"
    }
  ],
  "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](#).

5.11.9 Obtaining Slow Query Log Statistics (RDS for MySQL)

Function

This API is used to query and collect statistics on slow query logs based on service requirements.

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

Constraints

This API is supported for MySQL only.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/slowlog/statistics?
cur_page={cur_page}&per_page={per_page}&type={type}&start_date={start_d
ate}&end_date={end_date}&sort={sort}
- Parameter description

Table 5-333 Parameters

Parameter	Mandat ory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the ID of the DB instance to be queried.
cur_page	Yes	Specifies the page offset (the current page number, such as 1, 2, 3, or 4.)
per_page	Yes	Specifies the number of records on each page. The value ranges from 0 to 100.

Parameter	Mandatory	Description
start_date	Yes	Specifies the start date 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, in the Beijing time zone, the time zone offset is shown as +0800 .
end_date	Yes	Specifies the end time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 .
type	Yes	Specifies the statement type. If it is left blank, all statement types are queried. Valid value: • INSERT • UPDATE • SELECT • DELETE • CREATE • ALL
sort	No	Specifies the sorting mode. • executeTime: indicates sorting slow query logs by execution time in descending order. • If this parameter is left empty or set to other values, the slow query logs are sorted by executions in descending order.

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/cee5265e1e5845649e354841234567d/in01/slowlog/statistics?cur_page=1&per_page=2&type=INSERT&start_date=2020-02-06T10:41:14+0800&end_date=2020-02-07T10:41:14+0800&sort=executeTime

Response

- Normal response

Table 5-334 Parameters

Parameter	Type	Description
pageNumber	Integer	Indicates the current page number.
pageRecord	Integer	Indicates the number of records on each page.
slowLogList	List	See Table 5-335 .
totalRecord	Integer	Indicates the total number of records.
startTime	Long	Indicates the start time.
endTime	Long	Indicates the end time.

Table 5-335 slowLogList field data structure description

Parameter	Type	Description
count	String	Indicates the number of executions.
time	String	Indicates the execution time.
lockTime	String	Indicates the lock wait time.
rowsSent	Long	Indicates the number of sent rows.
rowsExamined	Long	Indicates the number of scanned rows.
database	String	Indicates the database which the slow log belongs to.
users	String	Indicates the account.
querySample	String	Indicates the execution syntax.
type	String	Indicates the statement type.
clientIP	String	Indicates the IP address.

- Example normal response

```
{
  "pageNumber": 1,
  "pageRecord": 10,
  "slowLogList": [],
  "totalRecord": 0,
  "startTime": null,
  "endTime": null
}
```

- 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](#).

5.11.10 Obtaining Links for Downloading Slow Query Logs

Function

This API is used to obtain links for downloading slow query logs. The downloaded logs contain only the logs of the primary node.

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

URI

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

Table 5-336 Parameters

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

Parameter	Mandatory	Description
instance_id	Yes	Definition ID of the instance to be queried. Constraints N/A Range N/A Default Value N/A

Request

Table 5-337 Parameters

Parameter	Mandatory	Type	Description
file_name	No	String	Definition Name of the file to be downloaded. To obtain the file name, click the instance name on the console and choose Logs > Slow Query Logs . Constraints This parameter is mandatory for Microsoft SQL Server. Range N/A Default Value N/A

Example Request

Obtain the link for downloading the slow query log **Database_slowlog_name**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
cee5265e1e5845649e354841234567dfin01/slowlog-download
{
  "file_name": "Database_slowlog_name"
}
```

Response

- Normal response

Table 5-338 Parameters

Parameter	Type	Description
list	List	Definition Indicates the links for downloading slow query logs. For details, see Table 5-339 .
status	String	Definition Indicates the status of generating links for downloading slow query logs. Range • FINISH: The download link has been generated. • CREATING: A file is being generated and the download link is to be prepared. • FAILED: Log files fail to be prepared.
count	Integer	Definition Indicates the number of links for downloading slow query logs. Range N/A

Table 5-339 linkInfo field data structure description

Parameter	Type	Description
workflow_id	String	Definition Task ID. Range For the MySQL DB engine, the value is always "".

Parameter	Type	Description
file_name	String	Definition Indicates the name of the generated file for downloading slow query logs. Range N/A
status	String	Definition Indicates the generation status of the current link. Range • EXPORTING: indicates that the download link is being generated. • SUCCESS: indicates that the download link is successfully generated. • FAILED: indicates that the download link failed to be generated.
file_size	String	Definition Indicates the file size in KB. Range N/A
file_link	String	Definition Indicates the download link. The link is valid for 5 minutes. Range N/A
create_at	Long	Definition Indicates the generation time. Range N/A

Parameter	Type	Description
update_at	Long	Definition Indicates the update time. Range N/A

- Example normal response

```
{
  "list": [
    {
      "workflow_id": "44fb1d85-2fcc-4d63-ad3b-c3d1ecd7000e",
      "file_name":
"054bc9c1f680d55c1f36c006e5a9f67b_slowlog_download_20200515080614589",
      "status": "SUCCESS",
      "file_size": "0",
      "file_link": "https://rdsbucket.xxr.obs.cn-
xianhz-1.myhuaweicloud.com:443/054bc9c1f680d55c1f36c006e5a9f67b_slowlog_download_20200515
080614589?AWSAccessKeyId=1BQ38TBCQHAVQXBUMUTC&Expires=1589530200&response-cache-
control=no-cache%2Cno-store&Signature=Fgi4%2BLOJ9frAXyOkz5hRoW5O%2BUM%3D",
      "create_at": 1589529991385,
      "update_at": 1589529991385
    }
  ],
  "status": "finish",
  "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](#).

5.11.11 Obtaining Links for Downloading Error Logs (RDS for PostgreSQL)

Function

This API is used to obtain links for downloading error logs of a DB instance.

You need to call this API repeatedly until **FINISH** is returned for **status**.

Or, you can use the **workflow_id** value returned by the first API call to query the task status. After the task is successfully executed, call the API again to obtain the download link.

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

Constraints

This API can only be used to obtain links for downloading error logs of an instance that is working properly.

URI

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

Table 5-340 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition ID of the instance to be queried. Constraints N/A Range N/A Default Value N/A

Request

- Parameter description
None
- URI example
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/3d39c18788b54a919bab633874c159dfin01/errorlog-download

Response

- Normal response

Table 5-341 Parameters

Parameter	Type	Description
list	Array of objects	Definition List of links for downloading error logs. For details, see Table 5-342 .
status	String	Definition Status of the error log download link. Range • FINISH: The download link has been generated. • CREATING: A file is being generated and the download link is being prepared. • FAILED: The log file fails to be prepared.
count	Integer	Definition Number of error log links. Range N/A

Table 5-342 Data structure description of the list field

Parameter	Type	Description
workflow_id	String	Definition Task ID. Range N/A
file_name	String	Definition Name of the generated file for downloading. Range N/A

Parameter	Type	Description
status	String	Definition Status of the current link. Range N/A
file_size	String	Definition File size. Range N/A
file_link	String	Definition Download link. Range N/A
create_at	Long	Definition Generation time. Range N/A
update_at	Long	Definition Update time. Range N/A

- Example normal response

Link for downloading error logs obtained successfully.

```
{
  "list": [ {
    "workflow_id": "44fb1d85-2fcc-4d63-ad3b-c3d1ecd7000e",
    "file_name": "054bc9c1f680d55c1f36c006e5a9f67b_errorlog_download_20200515080614589",
    "file_size": "0",
    "file_link": "https://
rdsbucket.xxx.myhuaweicloud.com:443/054bc9c1f680d55c1f36c006e5a9f67b_errorlog_download_2020
0515080614589?AWSAccessKeyId=1BQ38TBCQHAVQXBUMUTC&Expires=1589530200&response-
cache-control=no-cache%2Cno-store&Signature=Fgi4%2BLOJ9frAXyOkz5hRoW5O%2BUM%3D",
    "create_at": 1589529991385,
    "update_at": 1589529991385
  } ],
  "status": "finish",
  "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](#).

5.11.12 Setting SQL Audit

Function

This API is used to set a policy for SQL audit logs.

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

Constraints

This API is available only to RDS for MySQL and RDS for PostgreSQL.

URI

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

Table 5-343 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-344 Parameters

Parameter	Mandatory	Type	Description
keep_days	Yes	Integer	Number of days for storing audit logs. The value range is from 0 to 732. • 0: indicates that SQL audit is disabled. • 1 to 732: indicates the retention days for audit logs after SQL audit is enabled.
reserve_auditlogs	No	Boolean	This parameter is valid only when SQL audit is disabled. • true (default): indicates that historical audit logs will be reserved for some time when SQL audit is disabled. • false: indicates that historical audit logs will be deleted immediately when SQL audit is disabled.

Parameter	Mandatory	Type	Description
audit_types	No	Array of strings	This parameter applies only to RDS for MySQL. Operation types recorded in audit logs. This parameter is valid only when audit logging is enabled. If this parameter is left blank, all operation types will be recorded by default. - CREATE_USER, DROP_USER, RENAME_USER, GRANT, REVOKE, ALTER_USER, ALTER_USER_DEFAULT_ROLE - CREATE, ALTER, DROP, RENAME, TRUNCATE, REPAIR, OPTIMIZE - INSERT, DELETE, UPDATE, REPLACE, SELECT - BEGIN/COMMIT/ROLLBACK, PREPARED_STATEMENT, CALL_PROCEDURE, KILL, SET_OPTION, CHANGE_DB, UNINSTALL_PLUGIN, INSTALL_PLUGIN, SHUTDOWN, SLAVE_START, SLAVE_STOP, LOCK_TABLES, UNLOCK_TABLES, FLUSH, XA

Example Request

- Enable SQL Audit and set the audit log retention period to 5 days.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
cee5265e1e5845649e354841234567dfin01/auditlog-policy
```

```
{
  "keep_days":5,
  "audit_types": [
    "CREATE_USER"
  ]
}
```

- Disable SQL Audit and delete existing historical audit logs.

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

Response

- Normal response

Table 5-345 Parameters

Parameter	Type	Description
status	String	Definition Result of setting SQL audit. Range COMPLETED

- Example normal response

```
{
  "status": "COMPLETED"
}
```
- 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](#).

5.11.13 Querying the Policy for SQL Audit Logs

Function

This API is used to query the policy for SQL audit logs.

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

URI

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

Table 5-346 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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/cee5265e1e5845649e354841234567d/auditlog-policy

Response

- Normal response

Table 5-347 Parameters

Parameter	Type	Description
keep_days	Integer	Number of days for storing audit logs. The value is 0 when SQL audit is disabled.
audit_types	Array of strings	Actual operation types recorded in audit logs. If this parameter is left blank, no operation types are filtered out.
all_audit_log_action	String	All operation types that can be recorded in audit logs.

- Example normal response

```
{
  "keep_days":7,
  "audit_types":["CREATE_USER"],
  "all_audit_log_action":
  '{"DCL":"CREATE_USER,DROP_USER,RENAME_USER,GRANT,REVOKE,ALTER_USER,ALTER_USER_DEFAULT_ROLE","DDL":"CREATE,ALTER,DROP,RENAME,TRUNCATE,REPAIR,OPTIMIZE","DML":"INSERT,DELETE,UPDATE,REPLACE,SELECT","OTHER":"BEGIN/COMMIT/ROLLBACK,PREPARED_STATEMENT,CALL_PROCEDURE,KILL,SET_OPTION,CHANGE_DB,UNINSTALL_PLUGIN,UNINSTALL_PLUGIN,INSTALL_PLUGIN,SHUTDOWN,SLAVE_START,SLAVE_STOP,LOCK_TABLES,UNLOCK_TABLES,FLUSH,XA"}'
}
```

- 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](#).

5.11.14 Obtaining Audit Logs

Function

This API is used to obtain audit logs.

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

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/auditlog?
start_time={start_time}&end_time={end_time}&offset={offset}&limit={limit}
- Parameter description

Table 5-348 Parameters

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

Parameter	Mandatory	Description
instance_id	Yes	Definition ID of the instance to be queried. Constraints N/A Range N/A Default Value N/A
start_time	Yes	Definition Query start time. Constraints N/A 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, in the Beijing time zone, the time zone offset is shown as +0800. Default Value N/A
end_time	Yes	Definition Query end time. Constraints N/A Range The value is in the "yyyy-mm-ddThh:mm:ssZ" format. The end time must be later than the start time and the time span cannot be longer than 30 days. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800. Default Value N/A

Parameter	Mandatory	Description
offset	Yes	Definition Index offset. If offset is set to <i>N</i> , the query starts from the <i>N</i> +1 piece of data. The value 0 indicates that the query starts from the first piece of data. Constraints The value must be a non-negative number. Range An integer greater than or equal to 0 Default Value 0
limit	Yes	Definition Number of records to be queried. Constraints N/A Range [1, 50] Default Value N/A

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/cee5265e1e5845649e354841234567dfin01/auditlog?
start_time=2019-11-06T09:00:00+0800&end_time=2019-11-07T10:40:15+0800
&offset=0&limit=10

Response

- Normal response

Table 5-349 Parameters

Parameter	Type	Description
auditlogs	Array of objects	Definition Indicates detailed information. For details, see Table 5-350 .

Parameter	Type	Description
total_record	Integer	Definition Indicates the total number of records. Range N/A

Table 5-350 auditlogs field data structure description

Parameter	Type	Description
id	String	Definition Indicates the audit log ID. For the SQL Server engine, the ID is the audit log file name. Range N/A
name	String	Definition Indicates the audit log file name. Range N/A
size	double	Definition Indicates the size in KB of the audit log. Range N/A
begin_time	String	Definition Indicates the start time of the audit log. 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, in the Beijing time zone, the time zone offset is shown as +0800 .

Parameter	Type	Description
end_time	String	Definition Indicates the end time of the audit log. 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, in the Beijing time zone, the time zone offset is shown as +0800.

- Example normal response

```
{
  "auditlogs": [{
    "id": "fa163ea0e2bet11e9d832166a2cf894c5br01",
    "name":
"2943db4292ee4d4abb1ae2df4870fedf_528f6b03c71c4d559ca4f60b6e20795fin01/39779175_20220825/Audit/317156_20190916032844_eb8fe5d181ec44a2850302691541f760in01_Audit_166a2cf8-d832-11e9-94c5-fa163ea0e2be",
    "size": 20481.835938,
    "begin_time": "2019-11-06T09:03:34+0800",
    "end_time": "2019-11-06T10:39:15+0800"
  }, {
    "id": "fa163ea0e2bet11e9d832136a668094c5br01",
    "name":
"2943db4292ee4d4abb1ae2df4870fedf_528f6b03c71c4d559ca4f60b6e20795fin01/39779175_20220825/Audit/317162_20190916032838_eb8fe5d181ec44a2850302691541f760in01_Audit_136a6680-d832-11e9-94c5-fa163ea0e2be",
    "size": 20481.835938,
    "begin_time": "2019-11-07T09:04:35+0800",
    "end_time": "2019-11-07T10:38:16+0800"
  }],
  "total_record": 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](#).

5.11.15 Obtaining the Links for Downloading Audit Logs

Function

This API is used to obtain the links for downloading audit logs.

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

Constraints

This API is available only to RDS for MySQL and RDS for PostgreSQL.

URI

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

Table 5-351 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the ID of the queried DB instance.

Request

Table 5-352 Parameters

Parameter	Mandatory	Type	Description
ids	Yes	Array of strings	Specifies the list of audit logs. A maximum of 50 audit log IDs are allowed in the list.

Example Request

Obtain the links for downloading audit logs.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
cee5265e1e5845649e354841234567dfin01/auditlog-links

{
  "ids": ["fa163e9970a3t11e9d834e122fdceb1d6br01", "fa163ea0e2bet11e9d8364943103c94c5br01"]
}
```

Response

- Normal response

Table 5-353 Parameters

Parameter	Type	Description
links	Array of strings	Indicates the list of audit log download links. The validity period is 5 minutes.

- Example normal response

```
{
  "links": ["https://obs.domainname.com/rdsbucket.username.1/xxxxxx", "https://obs.domainname.com/rdsbucket.username.2/xxxxxx"]
}
```

- 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](#).

5.11.16 Setting the Local Retention Period of Binlogs

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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 5-354 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-355 Parameters

Parameter	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 5-356 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](#).

5.11.17 Obtaining the Local Retention Period of Binlogs

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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 5-357 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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 5-358 Parameters

Parameter	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 . 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](#).

5.11.18 Querying LTS Configurations

Function

This API is used to query LTS configurations.

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

URI

- URI format

GET /v3/{*project_id*}/{*engine*}/instances/logs/lts-configs?
offset={*offset*}&limit={*limit*}&instance_name={*instance_name*}&instance_id={*instance_id*}

- Parameter description

Table 5-359 Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID. Constraints N/A Range N/A Default Value N/A
engine	Yes	String	Definition DB engine type. Constraints N/A Range mysql, postgresql, and sqlserver, which are case insensitive. Default Value N/A
offset	No	Integer	Definition Index offset. Constraints N/A Range The query starts from the next piece of data indexed by this parameter. The value must be a number and cannot be a negative number. Default Value 0: The query starts from the first data record.

Parameter	Mandatory	Type	Description
limit	No	Integer	Definition Number of records returned by a query. Constraints N/A Range The value must be a positive integer ranging from 1 to 100. Default Value 100
instance_name	No	String	Definition Instance name, which can be used for filtering. Constraints N/A Range N/A Default Value N/A
instance_id	No	String	Definition Instance ID, which can be used for filtering. Constraints N/A Range N/A Default Value N/A

Request

None

Example Request

GET https://{Endpoint}/v3/054e292c9880d4992f02c0196d3ea468/sqlserver/instances/logs/lts-configs

Response

- Normal response

Table 5-360 Parameters

Parameter	Type	Description
total_count	Integer	Definition Total number of results. Range N/A
instance_lts_configs	Array of objects	Definition Instance LTS configuration list. For details, see Table 5-361 .

Table 5-361 instance_lts_configs field description

Parameter	Type	Description
lts_configs	Array of objects	Definition LTS configuration details. For details, see Table 5-362 .
instance	object	Definition Instance details. For details, see Table 5-363 .

Table 5-362 lts_configs field description

Parameter	Type	Description
log_type	String	Definition Log type. Range N/A
lts_group_id	String	Definition LTS log group ID. Range N/A
lts_stream_id	String	Definition LTS log stream ID. Range N/A

Parameter	Type	Description
enabled	Boolean	Definition Whether to enable log reporting to LTS. Range N/A

Table 5-363 instance field description

Parameter	Type	Description
id	String	Definition Instance ID. Range N/A
name	String	Definition Instance name. Range N/A
engine_name	String	Definition DB engine name. Range N/A
engine_version	String	Definition DB engine version. Range N/A
engine_category	String	Definition DB engine type. Range N/A

Parameter	Type	Description
status	String	Definition Instance status. Range • creating: The instance is being created. • createfail: The instance failed to be created. • normal: The instance is normal. • abnormal: The instance is abnormal. • data_disk_full: The instance storage is full. • deleted: The instance has been deleted. • shutdown: The instance is stopped.
enterprise_project_id	String	Definition Enterprise project ID. Range 0 : default enterprise project
actions	Array of strings	Definition Task that is being executed on the instance. Range N/A

- Example normal response

```
{
  "total_count" : 1,
  "instance_lts_configs" : [ {
    "lts_configs" : [ {
      "log_type" : "error_log",
      "lts_group_id" : "7598ae98-d2de-4bed-b1e8-26b380b3fc37",
      "lts_stream_id" : "8eec64c0-bd23-4ada-8147-76e57b10e63b",
      "enabled" : true
    } ],
    "instance" : {
      "id" : "2ed8f3de95fb47928326bf73dd4fb02din04",
      "name" : "rds-9f31",
      "engine_name" : "sqlserver",
      "engine_version" : "2019_SE",
      "engine_category" : "",
      "status" : "ACTIVE",
      "enterprise_project_id" : 0,
      "actions" : [ "BACKUP" ]
    }
  } ]
}
```

- 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 Instance Diagnosis

5.12.1 Obtaining the Number of Instances After Diagnosis

Function

This API is used to obtain the number of instances after diagnosis.

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

URI

- URI format
GET /v3/{project_id}/instances/diagnosis
- Parameter description

Table 5-364 Parameters

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

Table 5-365 Request parameters

Parameter	Mandatory	Type	Description
engine	Yes	String	Definition Engine type. Constraints N/A Range - mysql - postgresql - sqlserver Default Value N/A

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/diagnosis?engine=sqlserver

Response

- Normal response

Table 5-366 Parameters

Parameter	Type	Description
diagnosis	Array of objects	Definition Diagnosis details. For details, see Table 5-367 .

Table 5-367 diagnosis field data structure description

Parameter	Type	Description
name	String	Definition Diagnosis item. Range N/A

Parameter	Type	Description
count	Integer	Definition Number of instances. Range N/A

- Example normal response

```
{
  "diagnosis" : [ {
    "name" : "high_pressure",
    "count" : 1
  }, {
    "name" : "lock_wait",
    "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](#).

5.12.2 Obtaining the Result of a Specific Diagnosis Item

Function

This API is used to obtain the result of a specific diagnosis item.

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

URI

- URI format
GET /v3/{project_id}/instances/diagnosis/info
- Parameter description

Table 5-368 Parameters

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

Table 5-369 Request parameters

Parameter	Mandatory	Type	Description
engine	Yes	String	Definition Engine type. Constraints N/A Range - mysql - postgresql - sqlserver Default Value N/A

Parameter	Mandatory	Type	Description
diagnosis	Yes	String	Definition Diagnosis item. Constraints N/A Range • high_pressure • lock_wait • insufficient_capacity • slow_sql_frequency • disk_performance_cap • mem_overrun • age_exceed • connections_exceed Default Value N/A
offset	No	Integer	Definition Index offset. The query starts from the next piece of data indexed by this parameter. Constraints N/A Range The value must be a non-negative number. Default Value The default value is 0, indicating that the query starts from the first data record.
limit	No	Integer	Definition Number of returned results. Constraints N/A Range N/A Default Value 10

Request

- Request parameters

None

- URI example

GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/diagnosis/info?engine=sqlserver&diagnosis=high_pressure&offset=1&limit=10

Response

- Normal response

Table 5-370 Parameters

Parameter	Type	Description
diagnosis	String	Definition Diagnosis item. Range - high_pressure - lock_wait - insufficient_capacity - slow_sql_frequency - disk_performance_cap - mem_overrun - age_exceed - connections_exceed
total_count	Integer	Definition Number of instances. Range N/A
instances	Array of objects	Definition Specifies the DB instance ID. For details, see Table 5-371 .

Table 5-371 instances field data structure description

Parameter	Type	Description
id	String	Definition Specifies the DB instance ID. Range

- Example normal response

```
{
  "diagnosis" : "high_pressure",
  "total_count" : 1,
  "instances" : [ {
    "id" : "abd21a25fdedfd6db69721f4b761bc38in04"
  } ]
}
```

- 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 SQL Throttling (RDS for PostgreSQL)

5.13.1 Adding a SQL Throttling Rule for a Database

Function

This API is used to add a SQL throttling rule for a database.

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

URI

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

Table 5-372 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-373 Parameters

Parameter	Mandatory	Type	Description
db_name	Yes	String	Definition Database name. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
query_id	No	Long	Definition Internal hash code calculated by the SQL parse tree. Constraints N/A Range -9223372036854775808~9223372036854775807 Default Value 0
query_string	No	String	Definition Text format of an SQL statement. Constraints Only either query_id or query_string can be specified. Range N/A Default Value N/A
max_concurrency	Yes	Integer	Definition Number of SQL statements that can be executed at the same time. Constraints N/A Range -1~50000. If the value is less than or equal to 0, the number is not limited. Default Value 0
max_waiting	Yes	Integer	Definition Maximum waiting time, in seconds. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
search_path	No	String	Definition Schema search order set for names that are not schema-qualified. Constraints N/A Range N/A Default Value public

Example Request

Add a SQL throttling rule for a database.

```
POST https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/49b9dd1d6f464ba4bc91df5cbd2e52eb03/sql-limit
{
  "db_name": "postgres",
  "query_id": 1,
  "max_concurrency": 10,
  "max_waiting": 10,
  "search_path": "public"
}
```

Response

- Normal response

Table 5-374 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.13.2 Deleting a SQL Throttling Rule

Function

This API is used to delete a SQL throttling rule.

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

URI

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

Table 5-375 Parameters

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

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

Request

Table 5-376 Parameters

Parameter	Mandatory	Type	Description
db_name	Yes	String	Definition Database name. Constraints N/A Range N/A Default Value N/A
id	Yes	String	Definition SQL throttling rule ID. Constraints N/A Range N/A Default Value N/A

Example Request

```
DELETE https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/49b9dd1d6f464ba4bc91df5cbd2e52ebin03/sql-limit
{
```

```
"db_name" : "postgres",  
"id" : "1"  
}
```

Response

- Normal response

Table 5-377 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.13.3 Modifying a SQL Throttling Rule

Function

This API is used to modify a SQL throttling rule.

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

URI

- URI format
PUT /v3/{project_id}/instances/{instance_id}/sql-limit/update
- Parameter description

Table 5-378 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-379 Parameters

Parameter	Mandatory	Type	Description
db_name	Yes	String	Definition Database name. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
id	Yes	String	Definition SQL throttling rule ID. Constraints N/A Range N/A Default Value N/A
max_concurrency	Yes	Integer	Definition Number of SQL statements that can be executed at the same time. Constraints N/A Range -1–50000. If the value is less than or equal to 0, the number is not limited. Default Value 0
max_waiting	Yes	Integer	Definition Maximum waiting time, in seconds. Constraints N/A Range N/A Default Value N/A

Example Request

Modify a SQL throttling rule.

```
PUT https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/49b9dd1d6f464ba4bc91df5cbd2e52eb03/sql-limit/update
{
  "db_name": "postgres",
  "id": "1",
  "max_concurrency": 10,
  "max_waiting": 10
}
```

Response

- Normal response

Table 5-380 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.13.4 Querying SQL Throttling Rules

Function

This API is used to query SQL throttling rules.

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

URI

- URI format

```
GET /v3/{project_id}/instances/{instance_id}/sql-limit?  
db_name={db_name}&offset={offset}&limit={limit}
```

- Parameter description

Table 5-381 Parameters

Parameter	Man dato ry	Type	Description
project_id	Yes	String	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	String	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
db_name	Yes	String	Definition Database name. Constraints N/A Range N/A Default Value N/A
offset	No	Integer	Definition Index offset. The query starts from the next piece of data indexed by this parameter. Constraints N/A Range The value must be a non-negative number. Default Value The default value is 0 , indicating that the query starts from the first data record.

Parameter	Mandatory	Type	Description
limit	No	Integer	Definition Number of records returned by a query. Constraints N/A Range 1-100 Default Value 10

Request

None

Example Request

```
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/49b9dd1d6f464ba4bc91df5cbd2e52eb03/sql-limit?db_name=postgres&offset=0&limit=10
```

Response

- Normal response

Table 5-382 Parameters

Parameter	Type	Description
count	Integer	Definition Number of SQL throttling rules. Range N/A
sql_limit_objects	Array of objects	Definition SQL throttling rule details. For details, see Table 5-383 .

Table 5-383 sql_limit_objects field data structure description

Parameter	Type	Description
id	String	Definition SQL throttling rule ID. Range N/A
query_id	String	Definition Internal hash code calculated by the SQL parse tree. Range -9223372036854775808 to 9223372036854775807. The default value is 0 .
query_string	String	Definition Text format of an SQL statement. Range N/A
max_concurrency	Integer	Definition Number of SQL statements that can be executed at the same time. Range -1–50000. If the value is less than or equal to 0, the number is not limited. The default value is 0 .
is_effective	Boolean	Definition Whether the rule is effective. Range N/A
max_waiting	Integer	Definition Maximum waiting time, in seconds. Range N/A
search_path	String	Definition Schema search order set for names that are not schema-qualified. Range public

- Example normal response

```
{
  "count": 2,
  "sql_limit_objects": [
    {
```



```
{
  "id": "3",
  "query_id": "1147616880456321454",
  "query_string": "select 1;",
  "max_concurrency": 10,
  "is_effective": false,
  "max_waiting": 10,
  "search_path": "public"
},
{
  "id": "4",
  "query_id": "-7472493489976133824",
  "query_string": "select * from pg_type;",
  "max_concurrency": 10,
  "is_effective": false,
  "max_waiting": 10,
  "search_path": "public"
}
]
```

- 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](#).

5.13.5 Enabling or Disabling a SQL Throttling Rule or Disabling All SQL Throttling Rules

Function

This API is used to enable or disable a SQL throttling rule or disable all SQL throttling rules.

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

URI

- URI format
PUT /v3/{project_id}/instances/{instance_id}/sql-limit/switch
- Parameter description

Table 5-384 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-385 Parameters

Parameter	Mandatory	Type	Description
db_name	Yes	String	Definition Database name. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
id	Yes	String	Definition SQL throttling rule ID. Constraints N/A Range N/A Default Value N/A
action	Yes	String	Definition Action applied to the SQL throttling rule. Constraints N/A Range open: Enable the SQL throttling rule. close: Disable the SQL throttling rule. disable_all: Disable all SQL throttling rules. Default Value N/A

Example Request

Enable a SQL throttling rule.

```
PUT https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/49b9dd1d6f464ba4bc91df5cbd2e52eb03/sql-limit/switch
{
  "db_name": "postgres",
  "id": "1",
  "action": "open"
}
```

Response

- Normal response

Table 5-386 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.14 Database Proxy (RDS for MySQL)

5.14.1 Enabling Database Proxy

Function

This API is used to enable database proxy for a DB instance.

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

URI

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

Table 5-387 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID. Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range You can obtain the value of this parameter from the id field in Table 5-116. Default Value N/A

Request

Table 5-388 Parameters

Parameter	Mandatory	Type	Description
flavor_ref	Yes	String	Definition Specification code of the database proxy. Constraints N/A Range - When the site supports the database proxy in primary/standby mode, this parameter does not take effect. - When the site supports the database proxy in cluster mode, set this parameter to the value of code in the response body in Querying Database Proxy Specifications. Default Value N/A
node_num	Yes	Integer	Definition Number of database proxy nodes. Constraints N/A Range - When the site supports the database proxy in primary/standby mode, set this parameter to 2. - When the site supports the database proxy in cluster mode, the minimum value of this parameter is 2. For the maximum value, see the value of max_proxy_node_num in the response body in Querying Database Proxies. Default Value N/A

Parameter	Man dator y	Type	Description
proxy_name	No	String	Definition Name of the database proxy. Database proxies of the same type can have the same name under the same tenant. Constraints N/A Range The name must start with a letter and consist of 4 to 64 characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. If this parameter is not specified or the site supports only the database proxy in primary/standby mode, a random name will be generated. Default Value N/A
proxy_mode	No	String	Definition Read/write mode of the database proxy. Constraints N/A Range • readwrite (default value): readable and writable • readonly: read-only Default Value N/A
route_mode	No	Integer	Definition Routing policy of the database proxy. Constraints N/A Range • 0: weighted • 1: load balancing (The primary node does not process read requests.) • 2: load balancing (The primary node processes read requests.) Default Value N/A

Parameter	Mandatory	Type	Description
nodes_read_weight	Yes	Array of objects	Definition Read weights of database nodes. For details, see Table 5-389. Constraints - If proxy_mode is set to readonly, you need to configure a weight for at least one read replica. - If route_mode is set to a value greater than 0, the weight configured for the primary instance does not take effect.
subnet_id	No	String	Definition Subnet ID in the VPC hosting the DB instance. Constraints To use this parameter, contact customer service. Range The value can be any subnet ID in the VPC to which the instance belongs. To obtain the subnet ID, go to the subnet details page on the VPC console. Default Value N/A

Table 5-389 nodes_read_weight field data structure description

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

Parameter	Mandatory	Type	Description
weight	Yes	Integer	Definition Read weight assigned. Constraints N/A Range N/A Default Value N/A

Example Request

Enable database proxy for a DB instance.

```
POST https://rds.ap-southeast-1.myhuaweicloud.com/v3/23a50154cf494ec9ad6883979a12db0a/instances/920ec36cef814a8b830a5bed50d9a088in01/proxy/open
{
  "flavor_ref": "rds.proxy.xlarge.2",
  "node_num": 2,
  "proxy_name": "proxy-test",
  "nodes_read_weight": [
    {
      "instance_id": "917c67424dd54af3addf537a069e5b20in01",
      "weight": 1
    }
  ]
}
```

Response

- Normal response

Table 5-390 Parameters

Parameter	Type	Description
job_id	String	Definition Task ID. Range N/A

- Example normal response

```
{
  "job_id" : "09908118-8e32-4742-982a-7be194f59e1d"
}
```
- Abnormal response
For details, see [Abnormal Request Results](#).

Status Code

- Normal
201
- Abnormal
For details, see [Status Codes](#).

Error Code

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

5.14.2 Querying Database Proxies

Function

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

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

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/proxy-list
- Parameter description

Table 5-391 Parameters

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

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

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/23a50154cf494ec9ad6883979a12db0a/instances/920ec36cef814a8b830a5bed50d9a088in01/proxy-list

Response

- Normal response

Table 5-392 Parameters

Parameter	Type	Description
proxy_query_info_list	Array of objects	Definition List of database proxies under a DB instance. For details, see Table 5-393 .
max_proxy_num	Integer	Definition Maximum number of database proxies that can be enabled at the same time. Range N/A
max_proxy_node_num	Integer	Definition Maximum number of nodes allowed for one database proxy. Range N/A

Parameter	Type	Description
support_balance_route_mode_for_favored_version	Boolean	Definition Whether load balancing can be configured when a database proxy is created. Range N/A

Table 5-393 proxy_query_info_list field data structure description

Parameter	Type	Description
proxy	Object	Definition Database proxy information. For details, see Table 5-394 .
master_instance	Object	Definition Primary instance information. For details, see Table 5-397 .
readonly_instances	Array of objects	Definition Read replica information. For details, see Table 5-397 .
proxy_security_group_check_result	Boolean	Definition Whether the security group allows the database proxy to access the DB instance. Range N/A

Table 5-394 proxy field data structure description

Parameter	Type	Description
pool_id	String	Definition Database proxy ID. Range N/A

Parameter	Type	Description
status	String	Definition Database proxy status. Range • ENABLING: The database proxy is being enabled. • DISABLING: The database proxy is being disabled. • CHANGING_NODE_NUM: The number of nodes is being changed for the database proxy. • SCALING: The specifications of the database proxy are being changed. • UPGRADING: The kernel version of the database proxy is being upgraded. • IPMODIFYING: The read/write splitting address of the database proxy is being changed. • RESTARTING: The database proxy is being restarted. • TRANSACTION_SPLITTING: Transaction splitting is being enabled or disabled for the database proxy. • CONNECTION_POOL_SWITCH_OPERATING: The session connection pool type is being changed for the database proxy. • PORT_MODIFYING: The port of the database proxy is being changed. • PROXY_SSL_SWITCHING: The SSL status is being changed for the database proxy. • ALT_SWITCH_OPERATING: The ALT status is being changed for the database proxy. • CHANGING_RESOURCES: Resources are being changed for the database proxy. • NORMAL: The database proxy is running properly. • ABNORMAL: The database proxy is not running properly. • FAILED: The database proxy failed to be created. • FROZEN: The database proxy is frozen.

Parameter	Type	Description
address	String	Definition Read/write splitting address. Range N/A
port	Integer	Definition Port number. Range N/A
delay_thresh old_in_seconds	Integer	Definition Delay threshold, in seconds. Range N/A
cpu	String	Definition vCPUs of the database proxy. Range N/A
mem	String	Definition Memory size of the database proxy. Range N/A
node_num	Integer	Definition Number of database proxy nodes. Range N/A
nodes	Array of objects	Definition List of database proxy nodes. For details, see Table 5-395 .
mode	String	Definition Database proxy mode. Range - Cluster - Ha: primary/standby
flavor_info	Object	Definition Database proxy specifications. For details, see Table 5-396 .

Parameter	Type	Description
transaction_split	String	Definition Status of transaction splitting for the database proxy. Range • true: enabled • false: disabled
connection_pool_type	String	Definition Connection pool type. Range • CLOSED: The connection pool is closed. • SESSION: The session-level connection pool is enabled.
pay_mode	String	Definition Billing mode of the database proxy. Range • 0: pay-per-use billing • 1: yearly/monthly billing
name	String	Definition Name of the database proxy. Range N/A
proxy_mode	String	Definition Read/write mode of the database proxy. Range • readwrite: readable and writable • readonly: read-only
dns_name	String	Definition Private domain name for the read/write splitting address of the database proxy. Range If this parameter is left blank, no private domain name has been requested.
subnet_id	String	Definition ID of the subnet to which the database proxy belongs. Range N/A

Parameter	Type	Description
seconds_level_monitor_fun_status	String	Definition Status of Monitoring by Seconds of the database proxy. Range - off - on
alt_flag	Boolean	Definition ALT switch status. Range N/A
force_read_only	Boolean	Definition Whether to forcibly route read requests to read replicas. Range N/A
route_mode	Integer	Definition Routing policy of the database proxy. Range 0: weighted 1: load balancing (The primary instance does not process read requests.) 2: load balancing (The primary instance processes read requests.)
ssl_option	Boolean	Definition SSL switch status. Range N/A
support_balance_route_mode	Boolean	Definition Whether load balancing can be enabled for the database proxy. Range N/A
support_proxy_ssl	Boolean	Definition Whether SSL can be enabled for the database proxy. Range N/A

Parameter	Type	Description
support_switch_connection_pool_type	Boolean	Definition Whether the session connection pool type can be changed for the database proxy. Range N/A
support_transaction_split	Boolean	Definition Whether transaction splitting can be enabled for the database proxy. Range N/A

Table 5-395 nodes field data structure description

Parameter	Type	Description
id	String	Definition ID of the database proxy node. Range N/A
status	String	Definition Status of the database proxy node. Range • NORMAL: The node is normal. • ABNORMAL: The node is abnormal. • CREATING: The node is being created. • CREATEFAIL: The node failed to be created.
role	String	Definition Role of the database proxy node. Range • master: primary node • slave: standby node
az_code	String	Definition AZ where the database proxy node is located. Range N/A

Parameter	Type	Description
frozen_flag	Integer	Definition Whether the database proxy node is frozen. Range 0: unfrozen 1: frozen

Table 5-396 flavor_info field data structure description

Parameter	Type	Description
group_type	String	Definition CPU architecture. Range - X86 - ARM
code	String	Definition Specification code. Range N/A

Table 5-397 readonly_instances field data structure description

Parameter	Type	Description
id	String	Definition ID of the primary instance or read replica. Range N/A
status	String	Definition Node status. Range N/A
name	String	Definition Instance name. Range N/A

Parameter	Type	Description
weight	Integer	Definition Read weight of the instance. Range N/A
available_zones	Array of objects	Definition AZ information. For details, see Table 5-398 .

Table 5-398 available_zones field data structure description

Parameter	Type	Description
code	String	Definition AZ code. Range N/A
description	String	Definition AZ description. Range N/A

- Example normal response

```
{
  "proxy_query_info_list": [ {
    "proxy": {
      "pool_id": "e06ecf4dfea8409690c87a9ee6582b0dpo01",
      "status": "NORMAL",
      "address": "192.168.0.1",
      "port": 3306,
      "delay_threshold_in_seconds": 30,
      "cpu": "2",
      "mem": "4",
      "node_num": 2,
      "nodes": [ {
        "id": "3079919890f24fb8ab284571fc409058pn01",
        "status": "NORMAL",
        "role": "master",
        "az_code": "aaa",
        "frozen_flag": 0
      }, {
        "id": "804430ac9068419fa5e49d5ca0684172pn01",
        "status": "NORMAL",
        "role": "master",
        "az_code": "aaa",
        "frozen_flag": 0
      } ],
      "mode": "Cluster",
      "flavor_info": {
        "group_type": "X86",
        "code": "rds.proxy.large.2"
      }
    }
  ]
}
```

```

"transaction_split" : "false",
"connection_pool_type" : "CLOSED",
"pay_mode" : "0",
"name" : "test-hll",
"proxy_mode" : "readwrite",
"route_mode" : 1,
"dns_name" : "",
"subnet_id" : "2f75f35c-62ca-43b7-9954-8fd1e6be4641",
"ssl_option" : false,
"force_read_only" : false,
"seconds_level_monitor_fun_status" : "off",
"alt_flag" : false,
"support_transaction_split" : true,
"support_switch_connection_pool_type" : true,
"support_balance_route_mode" : true,
"support_proxy_ssl" : true
},
"master_instance" : {
  "id" : "920ec36cef814a8b830a5bed50d9a088in01",
  "status" : "normal",
  "name" : "rds-2c54",
  "weight" : 0,
  "available_zones" : [ {
    "code" : "aaa",
    "description" : "az3"
  } ]
},
"readonly_instances" : [ {
  "id" : "f9462b58982d484fb64fd9880504d863in01",
  "status" : "abnormal",
  "name" : "replica-f966",
  "weight" : 0,
  "available_zones" : [ {
    "code" : "aaa",
    "description" : "az3"
  } ]
} ],
"proxy_security_group_check_result" : false
} ],
"max_proxy_num" : 4,
"max_proxy_node_num" : 4,
"support_balance_route_mode_for_favored_version" : 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](#).

5.14.3 Querying Database Proxy Specifications

Function

This API is used to query database proxy specifications of a DB instance.

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

Constraints

This operation cannot be performed when the instance is in the abnormal or frozen state.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/proxy/flavors
- Parameter description

Table 5-399 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Table 5-400 Request parameters

Parameter	Mandatory	Type	Description
offset	No	Integer	Definition Index offset. The query starts from the next piece of data indexed by this parameter. Constraints N/A Range The value must be a non-negative number. Default Value The default value is 0, indicating that the query starts from the first data record.
limit	No	Integer	Definition Number of records to be queried. Constraints N/A Range 1–100 Default Value 100

Request

- Request parameters
None
- URI example
GET https://rds.ap-southeast-1.myhuaweicloud.com/v3/23a50154cf494ec9ad6883979a12db0a/instances/ba0fd7c13cca4655820e0f858d5d467bin01/proxy/flavors?offset=0&limit=100

Response

- Normal response

Table 5-401 Parameters

Parameter	Type	Description
compute_flavor_groups	Array of objects	Definition Specification group information. For details, see Table 5-402 .

Table 5-402 compute_flavor_groups element structure description

Parameter	Type	Description
group_type	String	Definition Specification group type. Range • X86 • ARM
compute_flavors	Array of objects	Definition Specification information. For details, see Table 5-403 .

Table 5-403 compute_flavors element structure description

Parameter	Type	Description
id	String	Definition Specification ID of the database proxy. Range N/A
code	String	Definition Specification code of the database proxy. Range N/A
cpu	String	Definition Number of vCPUs. Range For example, the value 1 indicates one vCPU.

Parameter	Type	Description
mem	String	Definition Memory size in GB. Range N/A
db_type	String	Definition Database type. Range N/A
az_status	Object	Definition AZ information. key indicates the AZ associated with the specification, and value indicates the specification status in the AZ. Only the specification status in the AZ where the primary instance is located is displayed. Range normal: The specification is normal. abandon: The specification is abandoned.

- Example normal response

```
{
  "compute_flavor_groups": [ {
    "group_type": "X86",
    "compute_flavors": [ {
      "id": "3208f282-7815-4ff8-9466-90a6fedd6b52",
      "code": "rds.proxy.large.2",
      "cpu": "2",
      "mem": "4",
      "db_type": "Proxy",
      "az_status": {
        "aaa": "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](#).

5.14.4 Configuring the Routing Policy for a Database Proxy

Function

This API is used to configure the routing policy for a database proxy.

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

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/proxy/{proxy_id}/route-mode
- Parameter description

Table 5-404 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Description
proxy_id	Yes	Definition Database proxy ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-405 Parameters

Parameter	Mandatory	Type	Description
master_weight	Yes	Integer	Definition Read weight of the primary instance. Constraints N/A Range - When route_mode is set to 0, the value of this parameter ranges from 0 to 1000. - When route_mode is set to a value other than 0, this parameter does not take effect. Default Value N/A
readonly_instances	Yes	Array of objects	Definition Read weights of database nodes. For details, see Table 5-406 . Constraints - You can only configure weights for read replicas. - This parameter can be left blank.

Parameter	Mandatory	Type	Description
route_mode	Yes	Integer	Definition Routing policy of the database proxy. Constraints N/A Range • 0: weighted • 1: load balancing (The primary instance does not process read requests.) • 2: load balancing (The primary instance processes read requests.) Default Value N/A

Table 5-406 readonly_instances field data structure description

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
weight	Yes	Integer	Definition Read weight assigned. Constraints N/A Range N/A Default Value N/A

Example Request

Configure the routing policy for a database proxy.

```
POST https://rds.ap-southeast-1.myhuaweicloud.com/v3/23a50154cf494ec9ad6883979a12db0a/instances/
ba0fd7c13cca4655820e0f858d5d467bin01/proxy/4e2a0c70f70f4807940db73a30b5b522po01/route-mode

{
  "master_weight" : 0,
  "readonly_instances" : [ {
    "instance_id" : "2edc88e921bb4129bb4d9b76be66811dno07",
    "weight" : 1
  } ],
  "route_mode" : 2
}
```

Response

- Normal response

Table 5-407 Parameters

Parameter	Type	Description
result	String	Definition Result of changing the routing policy of the database proxy. Range • failed • success

- 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](#).

5.14.5 Disabling Database Proxy

Function

This API is used to disable database proxy of a DB instance.

- Before calling this API, learn how to [authenticate](#) it.

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

URI

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

Table 5-408 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
proxy_id	Yes	Definition Database proxy ID. Constraints N/A Range N/A Default Value N/A

Request

- Parameter description

- None
- URI example
DELETE https://rds.ap-southeast-1.myhuaweicloud.com/v3/23a50154cf494ec9ad6883979a12db0a/instances/ba0fd7c13cca4655820e0f858d5d467bin01/proxy/4e2a0c70f70f4807940db73a30b5b522po01

Response

- Normal response

Table 5-409 Parameters

Parameter	Type	Description
job_id	String	Definition Task ID. Range N/A

- Example normal response

```
{  
  "job_id" : "09908118-8e32-4742-982a-7be194f59e1d"  
}
```
- 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](#).

5.15 Database and Account Management (MySQL)

5.15.1 Precautions

The **lower_case_table_names** parameter controls whether the MySQL database and table names are case sensitive. This parameter setting may affect the database or table configurations when the APIs in the following sections in this chapter are invoked.

For example, if you have set the table names to be case insensitive and enter a table name containing uppercase letters, the name of the created table may

contain only lowercase letters because the letter cases are insensitive. Therefore, when using the following APIs, ensure that the case of your input is the same as the actual case to avoid being affected by the case setting.

5.15.2 Creating a Database

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.
- For any database and account created using methods other than the RDS console and APIs, if the database name and account name do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), for example, containing Chinese characters or unsupported special characters, the database and account cannot be managed through the RDS console or APIs.
- In migration scenarios, if any database name and account name of the source database do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), the database and account cannot be managed through the RDS console or APIs after being migrated to the destination RDS for MySQL database.

URI

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

Table 5-410 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-411 Parameters

Parameter	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.
comment	No	String	Specifies the database remarks. The value can contain 0 to 512 characters. NOTE • To use this function, contact customer service to apply for the required permissions. • This parameter takes effect only for kernel versions 5.6.51.3 or later, 5.7.33.1 or later, and 8.0.25.1 or later. If your kernel version does not meet the requirements, upgrade the kernel to the latest version by referring to Upgrading a Minor Version.

Example Request

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


```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/  
database  
  
{  
  "name": "rds-test",  
  "character_set": "utf8",  
  "comment": "comment"  
}
```

Response

- Normal response

Table 5-412 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](#).

5.15.3 Querying Details About a Database (Discarded)

Function

This API is used to query details about a database on a specified DB instance.

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

Constraints

This operation cannot be performed when the DB instance is in the abnormal or frozen state.

URI

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

Table 5-413 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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/dsf23fsfdae3435in01/database

Response

- Normal response

Table 5-414 Parameters

Parameter	Type	Description
databases	Array of objects	Each element in the list indicates a database. For details, see Table 5-415 .

Table 5-415 databases element structure description

Parameter	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.

Parameter	Type	Description
users	Array of objects	Each element in the list indicates an account associated with the database. For details, see Table 5-416 .

Table 5-416 users element structure description

Parameter	Type	Description
name	String	Account name.
readonly	Boolean	Whether the permission is read-only. true: read-only false: read/write

- Example normal response

```
{
  "databases": [
    {
      "name": "rds-test",
      "character_set": "utf8",
      "users": [
        {
          "name": "rds",
          "readonly": false
        }
      ]
    },
    {
      "name": "testdb1",
      "character_set": "utf8",
      "users": []
    },
    {
      "name": "tt",
      "character_set": "utf8",
      "users": []
    }
  ]
}
```

- 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](#).

5.15.4 Querying Databases

Function

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

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

Constraints

- Databases cannot be queried when the DB instance is in the abnormal or frozen 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 5-417 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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/dsf23fsfdae3435in01/database/detail?page=1&limit=10

Response

- Normal response

Table 5-418 Parameters

Parameter	Type	Description
databases	Array of objects	Each element in the list indicates a database. For details, see Table 5-419 .
total_count	Integer	Indicates the total number of databases.

Table 5-419 databases element structure description

Parameter	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.
comment	String	Specifies the database remarks. NOTE If you did not specify this parameter during instance creation, this parameter cannot be queried.

- Example normal response

```
{
  "databases": [
    {
      "name": "rds-test",
      "character_set": "utf8",
      "comment": "comment"
    },
    {
      "name": "testdb1",
      "character_set": "utf8",
      "comment": "comment"
    },
    {
      "name": "tt",
      "character_set": "utf8",
      "comment": "comment"
    }
  ],
  "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](#).

5.15.5 Querying Authorized Databases of a Specified User

Function

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

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

Constraints

- This operation cannot be performed when the instance is in the abnormal or frozen state.
- If you delete a database using SQL statements, the deleted database will be displayed when you query the authorized databases through the API or RDS console.
- For databases authorized using the SQL statement **GRANT ALL ON *.* TO `user`@`host`**, no result will be returned after this API is called. You can run the **show grants for** command to query the authorized databases instead.
You are advised to authorize a database by specifying it: **GRANT ALL ON db1.* TO `user`@`host`**.

URI

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

Table 5-420 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .

Parameter	Mandatory	Description
instance_id	Yes	Specifies the DB instance ID.
user-name	Yes	Specifies the database username.
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/dsfae23fsfsdae3435in01/db_user/database?user-name=rds&page=1&limit=10

Response

- Normal response

Table 5-421 Parameters

Parameter	Type	Description
databases	Array of objects	Each element in the list indicates a database. For details, see Table 5-422 .
total_count	Integer	Indicates the total number of databases.

Table 5-422 databases element structure description

Parameter	Type	Description
name	String	Indicates the database name.

Parameter	Type	Description
readonly	Boolean	Indicates the read-only permission. • true: indicates the database is read-only. • false: indicates the database is readable and writable.

- Example normal response

```
{
  "databases": [
    {
      "name": "rds-test",
      "readonly": false
    },
    {
      "name": "testdb1",
      "readonly": true
    },
    {
      "name": "tt",
      "readonly": false
    }
  ],
  "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](#).

5.15.6 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 this API, learn how to [authenticate](#) it.
- Before calling this API, learn about [request header parameters](#).

Constraints

- To use this function, contact customer service to apply for the required permissions.
- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, frozen, 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 by referring to [Upgrading a Minor 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.
- For any database and account created using methods other than the RDS console and APIs, if the database name and account name do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), for example, containing Chinese characters or unsupported special characters, the database and account cannot be managed through the RDS console or APIs.
- In migration scenarios, if any database name and account name of the source database do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), the database and account cannot be managed through the RDS console or APIs after being migrated to the destination RDS for MySQL database.

URI

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

Table 5-423 Parameters

Parameter	Mandator y	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-424 Parameter description

Parameter	Mandator y	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/dsfac23fsfdsae3435in01/  
database/update  
  
{  
  "name": "rds",  
  "comment": "this is a comment"  
}
```

Response

- Normal response

Table 5-425 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](#).

5.15.7 Deleting a Database

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.
- For any database and account created using methods other than the RDS console and APIs, if the database name and account name do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), for example, containing Chinese characters or unsupported special characters, the database and account cannot be managed through the RDS console or APIs.
- In migration scenarios, if any database name and account name of the source database do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), the database and account cannot be managed through the RDS console or APIs after being migrated to the destination RDS for MySQL database.

URI

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

Table 5-426 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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/dsfae23fsfsdae3435in01/  
database/rds-test  
  
{}
```

Response

- Normal response

Table 5-427 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](#).

5.15.8 Creating a Database Account

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.
- If you want to call this API repeatedly to create database accounts for your DB instance, call it in serial.

- For any database and account created using methods other than the RDS console and APIs, if the database name and account name do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), for example, containing Chinese characters or unsupported special characters, the database and account cannot be managed through the RDS console or APIs.
- In migration scenarios, if any database name and account name of the source database do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), the database and account cannot be managed through the RDS console or APIs after being migrated to the destination RDS for MySQL database.

URI

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

Table 5-428 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-429 Parameters

Parameter	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. • 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	Specifies the password of the database account. Valid value: 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. You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.

Parameter	Mandatory	Type	Description
comment	No	String	Specifies remarks of the database account. The parameter must be 1 to 512 characters long and is supported only for MySQL 8.0.25 and later versions.
hosts	No	Array of strings	IP addresses that are allowed to access your DB instance. - If the IP address is set to %, all IP addresses are allowed to access your instance. - If the IP address is set to 10.10.10.%, all IP addresses in the subnet 10.10.10.X are allowed to access your instance. - Multiple IP addresses can be added.
databases	No	Array of objects	Databases that you can log in using the account. For details, see Table 5-430 .

Table 5-430 databases element structure description

Parameter	Mandatory	Type	Description
name	Yes	String	Database name.
readonly	No	Boolean	Whether the database is read-only. true: indicates the database is read-only. false: indicates the database is readable and writable.

Example Request

Creating a database account named **rds**

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

{
  "name": "rds",
  "password": "*****",
  "comment": "mysql",
  "hosts": [
    "%"
  ],
  "databases": [
    {
      "name": "****",
      "readonly": false
    }
  ]
}
```

Response

- Normal response

Table 5-431 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](#).

5.15.9 Querying Database Users of a DB Instance (Discarded)

Function

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

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

Constraints

- This operation cannot be performed when the DB instance is in the abnormal or frozen state.
- Database users of read replicas cannot be queried.

URI

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

Table 5-432 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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/db_user

Response

- Normal response

Table 5-433 Parameters

Parameter	Type	Description
users	Array of objects	Each element in the list indicates a database account. For details, see Table 5-434 .

Table 5-434 users element structure description

Parameter	Type	Description
name	String	Account name.
databases	Array of objects	Each element in the list indicates a database associated with the account. For details, see Table 5-435 .

Table 5-435 databases element structure description

Parameter	Type	Description
name	String	Indicates a database name.
readonly	Boolean	Indicates the read-only permission. true: indicates the read-only permission. false: indicates the read and write permission.

- Example normal response

```
{
  "users": [
    {
      "name": "rds",
      "comment": "user comment",
      "databases": [
        {
          "name": "rds-test",
          "readonly": false
        }
      ]
    }
  ],
}
```

```
{
  {
    "name": "rds001",
    "comment": "user comment",
    "databases": null
  }
}
```

- 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](#).

5.15.10 Querying Database Users

Function

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

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

Constraints

- This operation cannot be performed when the DB instance is in the abnormal or frozen 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 5-436 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .

Parameter	Mandatory	Description
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 5-437 Parameters

Parameter	Type	Description
users	Array of objects	Database account information. For details, see Table 5-438 .
total_count	Integer	Total number of database accounts.

Table 5-438 users element structure description

Parameter	Type	Description
name	String	Account name.
comment	String	Account remarks. This parameter is only available to RDS for MySQL 8.0.25 and later versions.

Parameter	Type	Description
databases	Array of objects	Databases authorized to the account. For details, see Table 5-439 .
hosts	Array of strings	Hosts configured for the account.

Table 5-439 databases element structure description

Parameter	Type	Description
name	String	Database name.
readonly	Boolean	Whether the permission is read-only.

- Example normal response

```
{
  "users": [
    {
      "name": "aaa",
      "comment": "user comment",
      "databases": [
        {
          "name": "db1",
          "readonly": false
        }
      ],
      "hosts": [
        "10.%"
      ]
    }
  ],
  "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](#).

5.15.11 Querying Authorized Users of a Specified Database

Function

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

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

Constraints

- This operation cannot be performed when the DB instance is in the abnormal or frozen 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 5-440 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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 5-441 Parameters

Parameter	Type	Description
users	Array of objects	Each element in the list indicates a database account. For details, see Table 5-442 .
total_count	Integer	Indicates the total number of database users.

Table 5-442 users element structure description

Parameter	Type	Description
name	String	Account name.
readonly	Boolean	Whether the permission is read-only. • 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](#).

5.15.12 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 this API, learn how to [authenticate](#) it.
- Before calling this API, learn about [request header parameters](#).

Constraints

- To use this function, contact customer service to apply for the required permissions.
- This operation cannot be performed when the DB instance is in any of the following statuses: creating, changing instance class, changing port, frozen, 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 by referring to [Upgrading a Minor 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.
- For any database and account created using methods other than the RDS console and APIs, if the database name and account name do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), for example, containing Chinese characters or unsupported special characters, the database and account cannot be managed through the RDS console or APIs.
- In migration scenarios, if any database name and account name of the source database do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), the database and account cannot be managed through the RDS console or APIs after being migrated to the destination RDS for MySQL database.

URI

- URI format

PUT /v3/{project_id}/instances/{instance_id}/db-users/{user_name}/comment

- Parameter description

Table 5-443 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.
user_name	Yes	Database username.

Request

Table 5-444 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/dsf23fsfdae3435in01/db-users/root/comment
{
  "comment": "this is a comment"
}
```

Response

- Normal response

Table 5-445 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](#).

5.15.13 Deleting a Database Account

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.
- For any database and account created using methods other than the RDS console and APIs, if the database name and account name do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), for example, containing Chinese characters or unsupported special characters, the database and account cannot be managed through the RDS console or APIs.
- In migration scenarios, if any database name and account name of the source database do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), the database and account cannot be managed through the RDS console or APIs after being migrated to the destination RDS for MySQL database.

URI

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

Table 5-446 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, 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 5-447 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](#).

5.15.14 Configuring a Password for a Database Account

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.
- For any database and account created using methods other than the RDS console and APIs, if the database name and account name do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), for example, containing Chinese characters or unsupported special characters, the database and account cannot be managed through the RDS console or APIs.
- In migration scenarios, if any database name and account name of the source database do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), the database and account cannot be managed through the RDS console or APIs after being migrated to the destination RDS for MySQL database.

URI

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

Table 5-448 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-449 Parameters

Parameter	Mandatory	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 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. You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.

Example Request

Set a password for user **rds**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdae3435in01/db_user/resetpwd
{
  "name": "rds",
  "password": "*****"
}
```

Response

- Normal response

Table 5-450 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](#).

5.15.15 Authorizing a Database Account

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.
- For any database and account created using methods other than the RDS console and APIs, if the database name and account name do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), for example, containing Chinese characters or unsupported special characters, the database and account cannot be managed through the RDS console or APIs.
- In migration scenarios, if any database name and account name of the source database do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), the database and account cannot be managed through the RDS console or APIs after being migrated to the destination RDS for MySQL database.

URI

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

Table 5-451 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-452 Parameters

Parameter	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 5-453 .

Table 5-453 users field data structure description

Parameter	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. • 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. • 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/dsfac23fsfdae3435in01/db_privilege
```

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


Response

- Normal response

Table 5-454 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](#).

5.15.16 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 this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.
- For any database and account created using methods other than the RDS console and APIs, if the database name and account name do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), for example, containing Chinese characters or unsupported special characters, the database and account cannot be managed through the RDS console or APIs.

- In migration scenarios, if any database name and account name of the source database do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), the database and account cannot be managed through the RDS console or APIs after being migrated to the destination RDS for MySQL database.

URI

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

Table 5-455 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-456 Parameters

Parameter	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 5-457 .

Table 5-457 users field data structure description

Parameter	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. - 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/dsfae23fsfsdae3435in01/db_privilege

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

Response

- Normal response

Table 5-458 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](#).

5.15.17 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 this API, learn how to [authenticate](#) it.
- 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.

This API is available to RDS for MySQL and RDS for PostgreSQL only.

URI

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

Table 5-459 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-460 Parameters

Parameter	Mandatory	Type	Description
db_user_pwd	Yes	String	Specifies the database password. Valid value: RDS for MySQL: 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 (~!@#%&^*-_ = +?,()&). RDS for PostgreSQL: 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 (~!@#%&^*-_ = +?,(,)). You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.

Example Request

Reset the password for user **root**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsf23fsfdae3435in01/
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](#).

5.16 Database and Account Management (PostgreSQL)

5.16.1 Creating a Database

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.
- If you create a database using other methods instead of invoking a v3 API, for example, logging in to a node or using a client tool, the database name verification rule is inconsistent with that of the v3 API. As a result, the v3 API may fail to be invoked to perform operations on the database.

URI

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

Table 5-461 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID. Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-462 Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Definition Specifies the database name. Constraints N/A Range 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. Default Value N/A
owner	No	String	Definition Specifies the database owner. Constraints N/A Range It must be an existing user not named after any system user. System users include rdsAdmin, rdsMetric, rdsBackup, rdsRepl, rdsProxy, and rdsDdm. Default Value root

Parameter	Mandatory	Type	Description
template	No	String	Definition Specifies the name of the database template. Constraints N/A Range The value can be template0 or template1. Default Value template1
character_set	No	String	Definition Specifies the database character set. Constraints N/A Range N/A Default Value UTF8

Parameter	Mandatory	Type	Description
lc_collate	No	String	Definition Specifies the database collocation. Constraints Comparison of the same string in different collations may have different results. For example, the execution result of select 'a'>'A'; is false when this parameter is set to en_US.utf8 and is true when this parameter is set to 'C'. If a database is migrated from Oracle to PostgreSQL, this parameter needs to be set to 'C' to meet your expectations. Collations supported by a database can be queried from system catalog pg_collation. Range N/A Default Value en_US.UTF-8
lc_ctype	No	String	Definition Specifies the character classification. Constraints N/A Range N/A Default Value en_US.UTF-8

Parameter	Mandatory	Type	Description
is_revoke_public_privilege	No	Boolean	Definition Specifies whether to revoke the PUBLIC CREATE permission of the public schema. Constraints N/A Range • true: indicates that the permission will be revoked. • false: indicates that the permission will not be revoked. Default Value If this parameter is not specified, the default value is false.

Example Request

Create a database named **rds_test**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/database

{
  "name": "rds_test",
  "owner": "test",
  "template": "template0",
  "character_set": "UTF8",
  "lc_collate": "en_US.UTF-8",
  "lc_ctype": "en_US.UTF-8",
  "is_revoke_public_privilege": true
}
```

Response

- Normal response

Table 5-463 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.16.2 Creating a Database Account

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, 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 5-464 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID. Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-465 Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Definition Specifies the username of the database account. Constraints N/A Range 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. System users include rdsAdmin, rdsMetric, rdsBackup, rdsRepl, rdsProxy, and rdsDdm. Default Value N/A
password	Yes	String	Definition Specifies the password of the database account. Constraints N/A Range 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. You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking. Default Value N/A

Example Request

Creating a database account named **rds**

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/db_user

{
  "name": "rds",
  "password": "*****"
}
```

Response

- Normal response

Table 5-466 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.16.3 Creating a Database Schema

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.

URI

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

Table 5-467 Parameters

Parameter	Mandator y	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-468 Parameters

Parameter	Mandatory	Type	Description
db_name	Yes	String	Definition Specifies the database name. Constraints N/A Range 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. Default Value N/A
schemas	Yes	Array of objects	Definition 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 5-469. Constraints N/A

Table 5-469 schemas field data structure description

Parameter	Mandatory	Type	Description
schema_name	Yes	String	Definition Specifies the schema name. Constraints N/A Range 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. RDS for PostgreSQL template databases include postgres, template0, and template1. Existing schemas include public and information_schema. Default Value N/A

Parameter	Mandatory	Type	Description
owner	Yes	String	Definition Specifies the database owner. Constraints N/A Range The value contains 1 to 63 characters. It cannot start with pg or a digit, and must be different from system usernames. System users include rdsAdmin, rdsMetric, rdsBackup, rdsRepl, rdsProxy, and rdsDdm. Default Value N/A

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 5-470 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.16.4 Granting Read or Write Permissions to a Database Account

Function

This API is used to grant read or write permissions to a database account in a specified DB instance.

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.
- By default, read-only users have the **create** and **usage** permissions on the public schema.

URI

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

- Parameter description

Table 5-471 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-472 Parameters

Parameter	Mandatory	Type	Description
db_name	Yes	String	Definition Database name. Constraints N/A Range 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. Default Value N/A
users	Yes	Array of objects	Definition 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 5-473. Constraints N/A

Table 5-473 users field data structure description

Parameter	Mandatory	Type	Description
name	Yes	String	Definition Specifies the username of the database account. Constraints N/A Range The database account name contains 1 to 63 characters, including letters, digits, and underscores (_). It cannot start with pg or a digit and must be different from system user names. System users include rdsAdmin, rdsMetric, rdsBackup, rdsRepl, rdsProxy, and rdsDdm. Default Value N/A
readonly	Yes	Boolean	Definition Specifies the database account permissions. Constraints N/A Range • true: read-only • false: read and write Default Value N/A

Parameter	Mandatory	Type	Description
schema_name	Yes	String	Definition Specifies the schema name. Constraints N/A Range The value cannot be empty and 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. This parameter is mandatory. RDS for PostgreSQL template databases include postgres, template0, and template1. Default Value N/A

Example Request

Grant read and write permissions to **rds** and **rds002**, and read-only permissions to **rds001**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/db_privilege
```

```
{
  "db_name": "rds_test",
  "users": [
    {
      "name": "rds",
      "readonly": false,
      "schema_name": "teste123"
    },
    {
      "name": "rds001",
      "readonly": true,
      "schema_name": "teste123"
    },
    {
      "name": "rds002",
      "readonly": false,
      "schema_name": "teste123"
    }
  ]
}
```



```
}  
]  
}
```

Response

- Normal response

Table 5-474 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.16.5 Resetting a Password for a Database Account

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.

URI

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

Table 5-475 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-476 Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Definition Specifies the username of the database account. Constraints N/A Range N/A Default Value N/A
password	Yes	String	Definition Specifies the password of the database account. Constraints N/A Range 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. Default Value N/A

Example Request

Reset the password of **rds**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/db_user/resetpwd
```

```
{
  "name": "rds",
  "password": "*****"
}
```

Response

- Normal response

Table 5-477 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.16.6 Querying Databases

Function

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

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

Constraints

- This operation cannot be performed when the DB instance is in the abnormal or frozen state.
- The details about databases of read replicas cannot be queried.

URI

- URI format

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

- Parameter description

Table 5-478 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID. Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
db	No	Definition Database name, which is case-insensitive for fuzzy search. Constraints N/A Range N/A Default Value N/A
page	Yes	Definition Page number. Constraints N/A Range The value starts from 1. Default Value N/A

Parameter	Mandatory	Description
limit	Yes	Definition Number of records on each page. Constraints N/A Range [1, 100] Default Value N/A

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/f569f1358436479dbcba8603c32cc4aein03/database/detail?page=1&limit=10

Response

- Normal response

Table 5-479 Parameters

Parameter	Type	Description
databases	Array of objects	Definition Each element in the list indicates a database. For details, see Table 5-480 .
total_count	Integer	Definition Indicates the total number of databases. Range N/A

Table 5-480 databases element structure description

Parameter	Type	Description
name	String	Definition Indicates the database name. Range N/A
owner	String	Definition Indicates the database owner. Range N/A
character_set	String	Definition Indicates the character set used by the database, such as UTF8 . Range N/A
collate_set	String	Definition Indicates the database collation, such as en_US.UTF-8 . Range N/A
size	Integer	Definition Indicates the database size, in bytes. Range N/A

- 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](#).

5.16.7 Querying Database Users

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.
- For any database and account created using methods other than the RDS console and APIs, if the database name and account name do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), for example, containing Chinese characters or unsupported special characters, the database and account cannot be managed through the RDS console or APIs.
- In migration scenarios, if any database name and account name of the source database do not meet the database naming rules (see [Table 5-411](#)) and account naming rules (see [Table 5-429](#)), the database and account cannot be managed through the RDS console or APIs after being migrated to the destination RDS for MySQL database.

URI

- URI format

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

- Parameter description

Table 5-481 Parameters

Parameter	Mandator y	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
page	Yes	Definition Page number. Constraints N/A Range The value starts from 1. Default Value N/A

Parameter	Mandatory	Description
limit	Yes	Definition Number of records on each page. Constraints N/A Range [1, 100] Default Value N/A

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/f569f1358436479dbcba8603c32cc4aein03/db_user/detail?page=1&limit=10

Response

- Normal response

Table 5-482 Parameters

Parameter	Type	Description
users	Array of objects	Definition Each element in the list indicates a database account. For details, see Table 5-483 .
total_count	Integer	Definition Indicates the total number of database users. Range N/A

Table 5-483 users element structure description

Parameter	Type	Description
name	String	Definition Indicates the account name. Range N/A
attributes	Object	Definition Indicates permission attributes of a user. For details, see Table 5-484 .
memberof	Array of strings	Definition Indicates default rights of a user. Range N/A

Table 5-484 attributes element structure description

Parameter	Type	Description
rolsuper	Boolean	Definition Whether a user has the super user permission. Range false: The user does not have the super user permission.

Parameter	Type	Description
rolinherit	Boolean	Definition Whether a user automatically inherits permissions of the role that the user belongs to. Range • true: The user automatically inherits the permissions of the role that the user belongs to. • false: The user does not automatically inherit the permissions of the role that the user belongs to.
rolcreaterole	Boolean	Definition Whether a user can create other sub-users. Range • true: The user can create other sub-users. • false: The user cannot create other sub-users.
rolcreatedb	Boolean	Definition Whether a user can create databases. Range • true: The user can create databases. • false: The user cannot create databases.

Parameter	Type	Description
rolcanlogin	Boolean	Definition Whether a user has the permissions to log in to a database. Range • true: The user has the permissions to log in to a database. • false: The user does not have the permissions to log in to a database.
rolconlimit	Integer	Definition Maximum number of concurrent connections to an instance. The value -1 indicates that there are no limitations on the number of concurrent connections. Range N/A
rolreplication	Boolean	Definition Whether a user is a replication role. Range • true: The user is a replication role. • false: The user is not a replication role.
rolbypassrls	Boolean	Definition Whether a user bypasses each row-level security policy. Range • true: The user bypasses each row-level security policy. • false: The user does not bypass each row-level security policy.

- 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](#).

5.16.8 Querying Database Schemas

Function

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

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

Constraints

- This operation cannot be performed when the DB instance is in the abnormal or frozen 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 5-485 Parameters

Parameter	Mandator y	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
db_name	Yes	Definition Specifies the database name. Constraints N/A Range Database names must be different from RDS for PostgreSQL template database names. RDS for PostgreSQL template databases include postgres, template0, and template1. Default Value N/A

Parameter	Mandatory	Description
page	Yes	Definition Page number. Constraints N/A Range The value starts from 1. Default Value N/A
limit	Yes	Definition Number of records on each page. Constraints N/A Range [1, 100] Default Value N/A

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 5-486 Parameters

Parameter	Type	Description
database_schemas	Array of objects	Definition Each element in the list indicates a database schema. For details, see Table 5-487 .

Parameter	Type	Description
total_count	Integer	Definition Indicates the total number of database schemas. Range N/A

Table 5-487 users element structure description

Name	Type	Description
schema_name	String	Definition Indicates a schema name. Range N/A
owner	String	Definition Indicates a schema owner. Range N/A

- 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](#).

5.16.9 Configuring Account Permissions

Function

This API is used to set account permissions to read-only or read/write.

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.

URI

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

Table 5-488 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-489 Parameters

Parameter	Mandatory	Type	Description
all_users	Yes	Boolean	Definition Whether to configure permissions for all database accounts. Constraints N/A Range • true: Configure permissions for all database accounts. The user_name parameter is ignored. • false: Configure permissions only for the account specified by user_name. Default Value N/A
user_name	No	String	Definition Username of the database account. Constraints N/A Range 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. System usernames include rdsAdmin, rdsMetric, rdsBackup, rdsRepl, rdsProxy, and rdsDdm. Default Value N/A

Parameter	Mandatory	Type	Description
readonly	Yes	Boolean	Definition Whether the permission is read-only. Constraints N/A Range • true: read-only • false: read/write Default Value N/A

Example Request

- Set all database accounts to read-only.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/f569f1358436479dbcba8603c32cc4aein03/user-privilege
```

```
{
  "all_users": true,
  "readonly": true
}
```

- Set all database accounts to readable and writable.

```
{
  "all_users": true,
  "readonly": false
}
```

- Set a single database account to read-only.

```
{
  "all_users": false,
  "user_name": "test1234",
  "readonly": true
}
```

- Set a single database account to readable and writable.

```
{
  "all_users": false,
  "user_name": "test1234",
  "readonly": false
}
```

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](#).

5.16.10 Changing the Database Owner

Function

This API is used to change the owner of a database.

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

Constraints

This operation cannot be performed when the DB instance is in the abnormal or frozen state.

URI

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

Table 5-490 Parameters

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

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

Request

Table 5-491 Parameters

Parameter	Mandatory	Type	Description
owner	Yes	String	Definition New username. Constraints N/A Range The username must be different from the name of the built-in user. Default Value N/A
database	Yes	String	Definition Database name. Constraints N/A Range The database name cannot be template0 , template1 , or postgres . Default Value N/A

Example Request

Change the owner of the **db1** database to **username1**.

```
POST https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in03/database/owner

{
  "owner" : "username1",
  "database" : "db1"
}
```

Response

- Normal response

Table 5-492 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.16.11 Granting a Role to a User

Function

This API is used to grant a role to a user.

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

Constraints

This operation cannot be performed when the DB instance is in the abnormal or frozen state.

Role granting in a circle is not allowed.

URI

- URI format
POST /v3/{project_id}/instances/{instance_id}/db-user-role
- Parameter description

Table 5-493 Parameters

Parameter	Mandator y	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-494 Parameters

Parameter	Mandatory	Type	Description
user	Yes	String	Definition Username. Constraints N/A Range The username must be different from the name of the built-in user. Default Value N/A
roles	Yes	Array of strings	Definition Role name. Constraints N/A Range The role name must be different from the names of built-in user roles. Default Value N/A

Example Request

Grant roles **user3** and **user4** to the user **user1**.

```
POST https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsdsae3435in03/db-user-role

{
  "user": "user1",
  "roles": [ "user3", "user4" ]
}
```

Response

- Normal response

Table 5-495 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.16.12 Revoking a Role from a User

Function

This API is used to revoke a role from a user.

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

Constraints

This operation cannot be performed when the DB instance is in the abnormal or frozen state.

URI

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

Table 5-496 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-497 Parameters

Parameter	Mandatory	Type	Description
user	Yes	String	Definition Username. Constraints N/A Range The username must be different from the names of built-in users. Default Value N/A

Parameter	Mandatory	Type	Description
roles	Yes	Array of strings	Definition Role name. Constraints N/A Range The role name must be different from the names of built-in user roles. Default Value N/A

Example Request

Revoke roles **user3** and **user4** from the user **user1**.

```
DELETE https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in03/db-user-role

{
  "user": "user1",
  "roles": [ "user3", "user4" ]
}
```

Response

- Normal response

Table 5-498 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.16.13 Querying Roles

Function

This API is used to query roles of users.

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

URI

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

Table 5-499 Parameters

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

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

Table 5-500 Query parameters

Parameter	Mandatory	Type	Description
user_name	No	String	Definition Username. Constraints N/A Range If this parameter is specified, the set of roles that can be granted to the user is returned. Default Value N/A

Request

None

Example Request

Query roles of a user.

```
GET https://rds.ap-southeast-1.myhuaweicloud.com/v3/8b3d99b2fb1148c69be8fe37bb896f27/instances/51986c9a48df43839a3ba300d6c5e91fin03/roles?user_name=user1
```

Response

- Normal response

Table 5-501 Parameters

Parameter	Type	Description
roles	Array of strings	Definition Role information. Range N/A

- Example normal response

```
{
  "roles" : [ "user3", "user4" ]
}
```

- 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](#).

5.16.14 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 this API, learn how to [authenticate](#) it.
- Before calling this API, learn about [request header parameters](#).

URI

- URI format

GET /v3/{project_id}/instances/{instance_id}/hba-info

- Parameter description

Table 5-502 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

- Request parameters
None
- URI example
GET <https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/e28979107ed04d3b8b2f1b819b8d2be3in03/hba-info>

Response

- Normal response

Table 5-503 Parameters

Parameter	Type	Description
Array elements	Array of objects	Definition Parameter list. For details, see Table 5-504 .

Table 5-504 Parameters

Parameter	Type	Description
type	String	Definition Connection type. Range Enumerated values: host, hostssl, and hostnossl
database	String	Definition Database name. Range The value can be any name other than template0 and template1. Use commas (,) to separate multiple names.
user	String	Definition Name of a user other than rdsAdmin, rdsMetric, rdsBackup, rdsRepl, and rdsProxy. Range • all indicates all database users of the DB instance. • Use commas (,) to separate usernames.
address	String	Definition Client IP address. 0.0.0.0/0 indicates that the user can access the database from any IP address. Range N/A
mask	String	Definition Subnet mask. Range The value is an empty character string by default.
method	String	Definition Authentication mode. Range Enumerated values: reject, md5, and scram-sha-256

Parameter	Type	Description
priority	Integer	Definition Configuration priority. Range N/A

- 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](#).

5.16.15 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 this API, learn how to [authenticate](#) it.
- Before calling this API, learn about [request header parameters](#).

URI

- URI format

PUT /v3/{project_id}/instances/{instance_id}/hba-info

- Parameter description

Table 5-505 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-506 Request parameters

Parameter	Mandatory	Type	Description
Array elements	No	Array of objects	Definition Parameters to be modified. For details, see Table 5-507 . Constraints N/A

Table 5-507 Parameters

Parameter	Mandatory	Type	Description
type	Yes	String	Definition Connection type. Constraints N/A Range Enumerated values: host , hostssl , and hostnoss Default Value N/A
database	Yes	String	Definition Database name. Constraints N/A Range The value can be any name other than template0 and template1 . Use commas (,) to separate multiple names. Default Value N/A
user	Yes	String	Definition Name of a user other than rdsAdmin , rdsMetric , rdsBackup , rdsRepl , and rdsProxy . Constraints N/A Range all indicates all database users of the DB instance. - Use commas (,) to separate multiple user names. Default Value N/A

Parameter	Mandatory	Type	Description
address	Yes	String	Definition Client IP address. 0.0.0.0/0 indicates that the user can access the database from any IP address. Constraints N/A Range N/A Default Value N/A
mask	No	String	Definition Subnet mask. Constraints N/A Range N/A Default Value An empty string
method	Yes	String	Definition Authentication mode. Constraints N/A Range Enumerated values: reject , md5 , and scram-sha-256 Default Value N/A

Parameter	Mandatory	Type	Description
priority	Yes	Integer	Definition Configuration priority. Constraints N/A Range The priority you specified determines whether to modify or add a record in the pg_hba.conf file. • 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. Default Value N/A

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 5-508 Parameters

Parameter	Type	Description
code	String	Definition Result code. Range N/A

Parameter	Type	Description
message	String	Definition Result description. Range N/A

– 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](#).

5.16.16 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 this API, learn how to [authenticate](#) it.
- Before calling this API, learn about [request header parameters](#).

URI

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

Table 5-509 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-510 Request parameters

Parameter	Mandatory	Type	Description
Array elements	No	Array of objects	Definition Parameters to be modified. For details, see Table 5-511 . Constraints N/A

Table 5-511 Parameters

Parameter	Mandatory	Type	Description
type	Yes	String	Definition Connection type. Constraints N/A Range Enumerated values: host , hostssl , and hostnossll Default Value N/A
database	Yes	String	Definition Database name. Constraints N/A Range The value can be any name other than template0 and template1 . Use commas (,) to separate multiple names. Default Value N/A
user	Yes	String	Definition Name of a user other than rdsAdmin , rdsMetric , rdsBackup , rdsRepl , and rdsProxy . Constraints N/A Range • all indicates all database users of the DB instance. • Use commas (,) to separate multiple usernames. Default Value N/A

Parameter	Mandatory	Type	Description
address	Yes	String	Definition Client IP address. 0.0.0.0/0 indicates that the user can access the database from any IP address. Constraints N/A Range N/A Default Value N/A
mask	No	String	Definition Subnet mask. Constraints N/A Range N/A Default Value An empty string
method	Yes	String	Definition Authentication mode. Constraints N/A Range Enumerated values: reject , md5 , and scram-sha-256 Default Value N/A
priority	Yes	Integer	Definition Configuration priority. Constraints N/A Range N/A Default Value N/A

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 5-512 Parameters

Parameter	Type	Description
code	String	Definition Result code. Range N/A
message	String	Definition Result description. Range N/A

- 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](#).

5.16.17 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 this API, learn how to [authenticate](#) it.
- Before calling this API, learn about [request header parameters](#).

URI

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

Table 5-513 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-514 Request parameters

Parameter	Mandatory	Type	Description
Array elements	No	Array of objects	Definition Parameters to be modified. For details, see Table 5-515 . Constraints N/A

Table 5-515 Parameters

Parameter	Mandatory	Type	Description
type	Yes	String	Definition Connection type. Constraints N/A Range Enumerated values: host , hostssl , and hostnssl Default Value N/A
database	Yes	String	Definition Database name. Constraints N/A Range The value can be any name other than template0 and template1 . Use commas (,) to separate multiple names. Default Value N/A

Parameter	Mandatory	Type	Description
user	Yes	String	Definition Name of a user other than rdsAdmin, rdsMetric, rdsBackup, rdsRepl, and rdsProxy. Constraints N/A Range • all indicates all database users of the DB instance. • Use commas (,) to separate multiple usernames. Default Value N/A
address	Yes	String	Definition Client IP address. 0.0.0.0/0 indicates that the user can access the database from any IP address. Constraints N/A Range N/A Default Value N/A
mask	No	String	Definition Subnet mask. Constraints N/A Range N/A Default Value An empty string

Parameter	Mandatory	Type	Description
method	Yes	String	Definition Authentication mode. Constraints N/A Range Enumerated values: reject , md5 , and scram-sha-256 Default Value N/A
priority	Yes	Integer	Definition Configuration priority. Constraints N/A Range N/A Default Value N/A

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 5-516 Parameters

Parameter	Type	Description
code	String	Definition Result code. Range N/A

Parameter	Type	Description
message	String	Definition Result description. Range N/A

- 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](#).

5.16.18 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 this API, learn how to [authenticate](#) it.
- 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 5-517 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Table 5-518 Request parameters

Parameter	Mandatory	Type	Description
start_time	No	String	Definition Start time. Constraints N/A Range N/A Default Value If this parameter is not specified, 00:00 (UTC time zone) on the current day is used by default.

Parameter	Mandatory	Type	Description
end_time	No	String	Definition End time. Constraints N/A Range N/A Default Value 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 5-519 Parameters

Parameter	Type	Description
Array elements	Array of objects	Definition Parameter list. For details, see Table 5-520 .

Table 5-520 Parameters

Parameter	Type	Description
status	String	Definition Change result. Range • success: The change has taken effect. • failed: The change did not take effect. • setting: The change is in progress.
time	String	Definition Time when the change was made. Range N/A
fail_reason	String	Definition Reason for a change failure. Range N/A
before_confs	Array of objects	Definition Original values. For details, see Table 5-521 .
after_confs	Array of objects	Definition New values. For details, see Table 5-522 .

Table 5-521 before_confs field description

Parameter	Type	Description
type	String	Definition Connection type. Range Enumerated values: host , hostssl , and hostnossll

Parameter	Type	Description
database	String	Definition Database name. Range The value can be any name other than template0 and template1. Use commas (,) to separate multiple names.
user	String	Definition Name of a user other than rdsAdmin, rdsMetric, rdsBackup, rdsRepl, and rdsProxy. Range • all indicates all database users of the DB instance. • Use commas (,) to separate multiple usernames.
address	String	Definition Client IP address. 0.0.0.0/0 indicates that the user can access the database from any IP address. Range N/A
mask	String	Definition Subnet mask. Range The value is an empty character string by default.
method	String	Definition Authentication mode. Range Enumerated values: reject, md5, and scram-sha-256
priority	Integer	Definition Configuration priority. Range N/A

Table 5-522 after_confs field description

Parameter	Type	Description
type	String	Definition Connection type. Range Enumerated values: host , hostssl , and hostnossl
database	String	Definition Database name. Range The value can be any name other than template0 and template1 . Use commas (,) to separate multiple names.
user	String	Definition Name of a user other than rdsAdmin , rdsMetric , rdsBackup , rdsRepl , and rdsProxy . Range all indicates all database users of the DB instance. - Use commas (,) to separate multiple usernames.
address	String	Definition Client IP address. 0.0.0.0/0 indicates that the user can access the database from any IP address. Range N/A
mask	String	Definition Subnet mask. Range The value is an empty character string by default.
method	String	Definition Authentication mode. Range Enumerated values: reject , md5 , and scram-sha-256

Parameter	Type	Description
priority	Integer	Definition Configuration priority. Range N/A

- 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](#).

5.17 Database and Account Management (Microsoft SQL Server)

5.17.1 Querying the Available SQL Server Character Set

Function

This API is used to query the SQL Server character set list.

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

URI

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

Table 5-523 Parameters

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

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/collations

Response

- Normal response

Table 5-524 Parameters

Parameter	Type	Description
charSets	List<String>	Definition Indicates the character set information list. Range N/A

- 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](#).

5.17.2 Creating a Database

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.

URI

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

Table 5-525 Parameters

Parameter	Mandator y	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-526 Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Definition Specifies the database name. Constraints N/A Range The database name can contain 1 to 64 characters, and can include letters, digits, hyphens (-), underscores (_), and periods (.). It cannot start or end with an RDS for SQL Server system database name. RDS for SQL Server system databases include master, msdb, model, tempdb, resource, and rdsadmin. Default Value N/A

Example Request

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

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
a8abe84a41364097be7c233c39275087in04/database
{
  "name": "rds-test"
}
```

Response

- Normal response

Table 5-527 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.17.3 Querying Databases

Function

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

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

Constraints

- This operation cannot be performed when the DB instance is in the abnormal, frozen, 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 5-528 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID. Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
page	Yes	Definition Page number. Constraints N/A Range The value is a positive integer starting from 1. Default Value N/A
limit	Yes	Definition Specifies the number of records on each page. Constraints N/A Range The value is a positive integer ranging from 1 to 100. Default Value N/A

Parameter	Mandatory	Description
db-name	No	Definition Specifies the database name. Constraints When this parameter is specified, the page and limit parameters need to be specified but do not take effect. Range N/A Default Value N/A
recover_model	No	Definition Specifies recovery models of databases. Constraints N/A Range • FULL: full recovery model • SIMPLE: simple recovery model • BULK_LOGGED: bulk-logged recovery model Default Value N/A

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 5-529 Parameters

Parameter	Type	Description
databases	Array of objects	Definition Each element in the list indicates a database. For details, see Table 5-530 .
total_count	Integer	Definition Indicates the total number of databases. Range N/A

Table 5-530 databases element structure description

Parameter	Type	Description
name	String	Definition Database name. Range N/A
character_set	String	Definition Character set used by the database. Range For details about the character sets supported by RDS for SQL Server, see Table 5-524 . Example value: Chinese_PRC_CI_AS

Parameter	Type	Description
state	String	Definition Indicates the database status. Range • Creating: The database is being created. • Running: The database is running. • Deleting: The database is being deleted. • Not Exists: 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](#).

5.17.4 Creating a Database Account

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, 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 5-531 Parameters

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

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

Request

Table 5-532 Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Definition Specifies the username of the database account. Constraints N/A Range It consists of 1 to 128 characters and must be different from system usernames. System users include rdsadmin , rdsuser , rdsbackup , and rdsmirror . Default Value N/A

Parameter	Mandator y	Type	Description
password	Yes	String	Definition Specifies the password of the database account. Constraints You are advised to enter a strong password to improve security and prevent security risks such as brute force cracking. Range 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. Default Value N/A

Example Request

Creating a database account named **rds**

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/a8abe84a41364097be7c233c39275087in04/db_user
{
  "name": "rds",
  "password": "*****"
}
```

Response

- Normal response

Table 5-533 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.17.5 Configuring a Password for a Database Account

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.
- For any database and account created using methods other than the RDS console and APIs, if the database name and account name do not meet the database naming rules (see [Table 5-532](#)) and account naming rules (see [Table 5-535](#)), for example, containing Chinese characters or unsupported special characters, the database and account cannot be managed through the RDS console or APIs.

URI

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

Table 5-534 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-535 Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Definition Username of the database account. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
password	Yes	String	Definition Password of the database account. Constraints You are advised to enter a strong password to improve security and prevent security risks such as brute force cracking. Range 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. Default Value N/A

Example Request

Change the password of the rdsuser user.

```
POST https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/161e33e453954e21acff65bfa3dbfebin04/db_user/resetpwd
{
  "name": "rdsuser",
  "password": "Test@12345678"
}
```

Response

- Normal response

Table 5-536 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.17.6 Querying Database Users

Function

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

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

Constraints

- This operation cannot be performed when the DB instance is in the abnormal or frozen 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 5-537 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID. Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
page	Yes	Definition Page number. Constraints N/A Range The value is a positive integer starting from 1. Default Value N/A
limit	Yes	Definition Specifies the number of records on each page. Constraints N/A Range The value is a positive integer ranging from 1 to 100. Default Value N/A

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/a8abe84a41364097be7c233c39275087in04/db_user/detail?page=1&limit=10

Response

- Normal response

Table 5-538 Parameters

Parameter	Type	Description
users	Array of objects	Definition Each element in the list indicates a database account. For details, see Table 5-539 .
total_count	Integer	Definition Indicates the total number of database users. Range N/A

Table 5-539 users element structure description

Parameter	Type	Description
name	String	Definition Indicates the account name. Range N/A

Parameter	Type	Description
state	String	Definition Indicates the database user status. Range • 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](#).

5.17.7 Querying Authorized Users of a Specified Database

Function

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

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

Constraints

- This operation cannot be performed when the DB instance is in the abnormal or frozen 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 5-540 Parameters

Parameter	Mandator y	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
db-name	Yes	Definition Specifies the database name. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Description
page	Yes	Definition Page number. Constraints N/A Range The value is a positive integer starting from 1. Default Value N/A
limit	Yes	Definition Number of records on each page. Constraints N/A Range The value is a positive integer ranging from 1 to 100. Default Value N/A

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 5-541 Parameters

Parameter	Type	Description
users	Array of objects	Definition Each element in the list indicates a database account. For details, see Table 5-542 .

Parameter	Type	Description
total_count	Integer	Definition Indicates the total number of database users. Range N/A

Table 5-542 users element structure description

Parameter	Type	Description
name	String	Definition Account name. Range N/A

- 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](#).

5.17.8 Deleting a Database Account

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.

URI

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

Table 5-543 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Description
user_name	Yes	Definition Specifies the username of the account to be deleted. Constraints N/A Range N/A Default Value N/A

Request

Empty request body.

Example Request

```
DELETE https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
a8abe84a41364097be7c233c39275087in04/db_user/rds
{}

```

Response

- Normal response

Table 5-544 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.17.9 Authorizing a Database Account

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.

URI

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

Table 5-545 Parameters

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

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

Request

Table 5-546 Parameters

Parameter	Mandatory	Type	Description
db_name	Yes	String	Definition Database name. Constraints N/A Range N/A Default Value N/A
users	Yes	Array of objects	Definition 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 5-547 .

Table 5-547 users field data structure description

Parameter	Mandatory	Type	Description
name	Yes	String	Definition Username of the database account. Constraints Currently, SQL users without login names cannot be authorized. Range It can contain up to 128 characters and must be different from system usernames. System users include rdsadmin , rdsuser , rdsbackup , and rdsmirror . Default Value N/A
readonly	No	Boolean	Definition Whether the permission is read-only. Constraints N/A Range true: read-only false: read/write Default Value false

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 5-548 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.17.10 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 this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.

URI

- URI format

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

- Parameter description

Table 5-549 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-550 Parameters

Parameter	Mandatory	Type	Description
db_name	Yes	String	Definition Database name. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
users	Yes	Array of objects	Definition 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 5-551 .

Table 5-551 users field data structure description

Parameter	Mandatory	Type	Description
name	Yes	String	Definition Username of the database account. Constraints N/A Range It contains 1 to 128 characters and must be different from system usernames. System users include rdsadmin , rdsuser , rdsbackup , and rdsmirror . Default Value N/A

Example Request

```
DELETE https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
a8abe84a41364097be7c233c39275087in04/db_privilege

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

```
    "name": "rds001"  
  }  
]  
}
```

Response

- Normal response

Table 5-552 Parameters

Parameter	Type	Description
resp	String	Definition Calling result. Range Returns successful if the calling 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](#).

5.17.11 Adding Host Addresses for MSDTC

Function

This API is used to add host addresses for Microsoft Distributed Transaction Coordinator (MSDTC).

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

URI

- URI format

POST /v3/{project_id}/instances/{instance_id}/msdtc/host

- Parameter description

Table 5-553 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-554 Parameters

Parameter	Mandatory	Type	Description
hosts	No	Array of objects	Definition Host information. For details on the element structure, see Table 5-555 .

Table 5-555 hosts data structure description

Parameter	Mand atory	Type	Description
host_name	Yes	String	Definition Host name. Constraints N/A Range N/A Default Value N/A
ip	Yes	String	Definition Host IP address. Constraints N/A Range N/A Default Value N/A

Example Request

Add host addresses for MSDTC.

```
POST https://{endpoint}/v3/054b93101a00d3a02fe3c01fb31462ac/instances/  
463a6520abc34588850ea5bfb245e4fin04/msdtc/host  
  
{  
  "hosts" : [ {  
    "host_name" : "pc1",  
    "ip" : "127.0.0.1"  
  } ]  
}
```

Response

- Normal response

Table 5-556 Parameters

Parameter	Type	Description
job_id	String	Definition Task ID. Range N/A

- Example normal response

```
{
  "job_id" : "603d87db-9a91-411e-b369-ca4d72007e27"
}
```

- 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](#).

5.17.12 Querying MSDTC Hosts

Function

This API is used to query MSDTC hosts.

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

URI

- URI format

GET /v3/{project_id}/instances/{instance_id}/msdtc/hosts?
offset={offset}&limit={limit}

- Parameter description

Table 5-557 Parameters

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

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
offset	No	Integer	Definition Index offset. The query starts from the next piece of data indexed by this parameter. Constraints N/A Range The value must be a non-negative number. Default Value The default value is 0 , indicating that the query starts from the first data record.
limit	No	Integer	Definition Number of records returned by a query. Constraints N/A Range 1–100 Default Value 10

Request

- Request parameters

None

- URI example

GET <https://{endpoint}/v3/054b93101a00d3a02fe3c01fb31462ac/instances/8ef19e30cbf44c79b63c7e6b2168a400in04/msdtc/hosts>

Response

- Normal response

Table 5-558 Parameters

Parameter	Type	Description
total_count	Integer	Definition Total number of hosts. Range N/A
hosts	Array of objects	Definition Host list. For details, see Table 5-559 .

Table 5-559 hosts element structure description

Parameter	Type	Description
id	String	Definition Host ID. Range N/A
host	String	Definition Host address. Range N/A
host_name	String	Definition Host name. Range N/A

- Example normal response

```
{
  "total_count": 1,
  "hosts": [ {
    "id": "527dd9ca-cc2c-4bac-8707-f9b4f55343f4",
    "host": "192.168.0.90",
    "host_name": "MSSQL-00E5FB7A"
  } ]
}
```

- 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](#).

5.18 Parameter Management

5.18.1 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 this API, learn how to [authenticate](#) it.
- 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 5-560 Parameters

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

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/configurations

Response

- Normal response

Table 5-561 Parameters

Parameter	Type	Description
configurations	Array of objects	Definition Indicates the parameter template list. For details, see Table 5-562 .

Table 5-562 configurations field data structure description

Parameter	Type	Description
id	String	Definition Indicates the parameter template ID. Range N/A

Parameter	Type	Description
name	String	Definition Indicates the parameter template name. Range N/A
description	String	Definition Indicates the parameter template description. Range N/A
datastore_version_name	String	Definition Indicates the database version name. Range N/A
datastore_name	String	Definition Indicates the database name. Range N/A
created	String	Definition Indicates the creation time. 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, in the Beijing time zone, the time zone offset is shown as +0800 .
updated	String	Definition Indicates the update time. 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, in the Beijing time zone, the time zone offset is shown as +0800 .

Parameter	Type	Description
user_defined	Boolean	Definition Indicates whether the parameter template is a custom template. Range ● 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](#).

5.18.2 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 this API, learn how to [authenticate](#) it.
- 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 5-563 Parameters

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

Request

Table 5-564 Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Definition Specifies the parameter template name. Constraints It contains a maximum of 64 characters and can contain only uppercase letters, lowercase letters, digits, hyphens (-), underscores (_), and periods (.). Range N/A Default Value N/A
datastore	Yes	Object	Definition Specifies the database object. For details, see Table 5-565. Constraints N/A
description	No	String	Definition Specifies the parameter template description. Constraints It contains a maximum of 256 characters and cannot contain the following special characters: > ! < " & ' = Its value is left blank by default. Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
values	No	Map<String,String>	Definition Specifies the parameter values defined by users based on the default parameter templates. Constraints N/A Range • 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 empty, the parameter value cannot be empty, either. Default Value By default, the parameter values are not changed.

Table 5-565 datastore field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	Definition DB engine. Constraints The value is case-insensitive. Range • MySQL • PostgreSQL • SQLServer Default Value N/A

Parameter	Mandatory	Type	Description
version	Yes	String	Definition DB engine version. Constraints For details, see Constraints . Range - MySQL: 5.7 - PostgreSQL: 12 - Microsoft SQL Server: 2014_SE Default Value N/A

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 5-566 Parameters

Parameter	Type	Description
configuration	Object	Definition Indicates the parameter template information. For details, see Table 5-567 .

Table 5-567 configuration field data structure description

Parameter	Type	Description
id	String	Definition Indicates the parameter template ID. Range N/A
name	String	Definition Indicates the parameter template name. Range N/A
datastore_version_name	String	Definition Indicates the database version name. Range N/A
datastore_name	String	Definition Indicates the database name. Range N/A
description	String	Definition Indicates the parameter template description. Range N/A
created	String	Definition Indicates the creation time. 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, in the Beijing time zone, the time zone offset is shown as +0800 .

Parameter	Type	Description
updated	String	Definition Indicates the update time. 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, in the Beijing time zone, the time zone offset is shown as +0800 .

- 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](#).

5.18.3 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 this API, learn how to [authenticate](#) it.
- 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*.
- Modifying sensitive parameters, for example, **lower_case_table_names**, is risky. For details, see "[Suggestions on RDS for MySQL Parameter Tuning](#)" 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 5-568 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
config_id	Yes	Definition Specifies the parameter template ID. Constraints N/A Range N/A Default Value N/A

Request

NOTICE

At least one parameter in the request body must be specified. Otherwise, the request fails to be delivered.

Table 5-569 Parameters

Parameter	Mandatory	Type	Description
name	No	String	Definition Specifies the parameter template name. Constraints It contains a maximum of 64 characters and can contain only uppercase letters, lowercase letters, digits, hyphens (-), underscores (_), and periods (.). Range N/A Default Value N/A
description	No	String	Definition Specifies the parameter template description. Constraints It contains a maximum of 256 characters and does not support the following special characters: !<>='&" Its value is left blank by default. Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
values	No	Map<String,String>	Definition Specifies the parameter values defined by users based on the default parameter templates. Constraints N/A Range • 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 empty, the parameter value cannot be empty, either. Default Value If this parameter is not specified, no parameter value is to be changed.

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 5-570 Parameters

Parameter	Type	Description
configuration	Object	Definition Parameter template information. For details, see Table 5-571 .

Table 5-571 configuration field data structure description

Parameter	Type	Description
id	String	Definition Parameter template ID. Range N/A
name	String	Definition Parameter template name. Range N/A
ignored_params	List	Definition 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 . Range N/A

- 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](#).

5.18.4 Replicating a Parameter Template

Function

This API is used to replicate a parameter template.

- Before calling this API, learn how to [authenticate](#) it.
- 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
POST /v3/{project_id}/configurations/{config_id}/copy
- Parameter description

Table 5-572 Parameters

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

Parameter	Mandatory	Description
config_id	Yes	Definition Parameter template ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-573 Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Definition Name of the new parameter template. Constraints The name can contain 1 to 64 characters. It is case-sensitive and can contain only letters, digits, periods (.), underscores (_), and hyphens (-). Range N/A Default Value N/A
description	No	String	Definition Description of the new parameter template. Constraints The description can contain 0 to 256 characters and cannot contain the following characters: ! < > = & " ' , Range N/A Default Value N/A

Example Request

Replicate a parameter template and name the new template **copy_by_v31**.

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/configurations/66251c9024774eeb9edd8663a4cbb0a1pr04/copy
{
  "name" : "copy_by_v31",
  "description" : "copy"
}
```

Response

- Normal response

Table 5-574 Parameters

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

Parameter	Type	Description
create_time	String	Definition Creation time. 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, in the Beijing time zone, the time zone offset is shown as +0800 .
update_time	String	Definition Update time. 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, in the Beijing time zone, the time zone offset is shown as +0800 .

- Example normal response

```
{
  "id" : "a73a272e50ba427397e90992fbb96f3cpr04",
  "name" : "copy_by_v31",
  "description" : "copy",
  "datastore_version_name" : "2017_EEmysql5.7",
  "datastore_name" : "sqlservermysql",
  "create_time" : "2022-10-31T08:24:06+0000",
  "update_time" : "2022-10-31T08:24:06+0000"
}
```

- 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](#).

5.18.5 Querying Change History of Instance Parameters

Function

This API is used to query parameter change history of a DB instance.

- Before calling this API, learn how to [authenticate](#) it.
- 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}/configuration-histories?
offset={offset}&limit={limit}&start_time={start_time}&end_time={end_time}&
param_name={param_name}
- Parameter description

Table 5-575 Parameters

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

Parameter	Mandatory	Type	Description
offset	No	Integer	Definition Pagination parameter. Constraints N/A Range N/A Default Value 0
limit	No	Integer	Definition Pagination parameter. Constraints N/A Range N/A Default Value 10
start_time	No	String	Definition Start time. Constraints N/A 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, in the Beijing time zone, the time zone offset is shown as +0800 . Default Value The default value is seven days before the current time.

Parameter	Mandatory	Type	Description
end_time	No	String	Definition End time. Constraints N/A 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, in the Beijing time zone, the time zone offset is shown as +0800 . Default Value The default value is the current time.
param_name	No	String	Definition Parameter name. Constraints N/A Range N/A Default Value N/A

Request

- Parameter description
None
- URI example
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/1922f9c9144a421d9d1dfcb7377a849ain04/configuration-histories

Response

- Normal response

Table 5-576 Parameters

Parameter	Type	Description
total_count	Integer	Definition Total number of historical records. Range N/A
histories	Array of objects	Definition Parameter change history list. For details, see Table 5-577 .

Table 5-577 histories data structure description

Parameter	Type	Description
parameter_name	String	Definition Parameter name. Range N/A
old_value	String	Definition Old parameter value. Range N/A
new_value	String	Definition New parameter value. Range N/A
update_result	String	Definition Update result. Valid Value: Range - SUCCESS - FAILED

Parameter	Type	Description
applied	Boolean	Definition Whether the new value has been applied to the instance. Range • true: indicates that the new value has been applied. • false: indicates that the new value has not been applied.
update_time	String	Definition Time when the value is updated. Range N/A
apply_time	String	Definition Time when the new value is applied to the instance. Range N/A

- Example normal response

```
{
  "total_count": 3,
  "histories": [ {
    "parameter_name": "fill factor (%)",
    "old_value": "0",
    "new_value": "2",
    "update_result": "SUCCESS",
    "applied": true,
    "update_time": "2022-10-29T09:39:21+0000",
    "apply_time": "2022-10-31T01:46:29+0000"
  }, {
    "parameter_name": "remote login timeout (s)",
    "old_value": "10",
    "new_value": "20",
    "update_result": "SUCCESS",
    "applied": true,
    "update_time": "2022-10-29T09:38:36+0000",
    "apply_time": "2022-10-29T09:38:36+0000"
  }, {
    "parameter_name": "remote query timeout (s)",
    "old_value": "600",
    "new_value": "601",
    "update_result": "SUCCESS",
    "applied": true,
    "update_time": "2022-10-29T09:40:30+0000",
    "apply_time": "2022-10-29T09:40:30+0000"
  } ]
}
```

- 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](#).

5.18.6 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 this API, learn how to [authenticate](#) it.
- 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 5-578 Parameters

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

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

Request

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

Response

- Normal response

Table 5-579 Parameters

Parameter	Type	Description
datastore_version_name	String	Definition Indicates the database version name. Range N/A
datastore_name	String	Definition Indicates the database name. Range N/A

Parameter	Type	Description
created	String	Definition Indicates the creation time. 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, in the Beijing time zone, the time zone offset is shown as +0800 .
updated	String	Definition Indicates the update time. 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, in the Beijing time zone, the time zone offset is shown as +0800 .
configuration_parameters	Array of objects	Definition Indicates the parameters defined by users based on the default parameter templates. For details, see Table 5-580 .

Table 5-580 configuration_parameters field data structure description

Parameter	Type	Description
name	String	Definition Indicates the parameter name. Range N/A
value	String	Definition Indicates the parameter value. Range N/A

Parameter	Type	Description
restart_required	Boolean	Definition Indicates whether a reboot is required. Range false: A reboot is not required. true: A reboot is required.
readonly	Boolean	Definition Indicates whether the parameter is read-only. Range false: The parameter is not read-only. true: The parameter is read-only.
value_range	String	Definition Indicates the parameter value range. Range If the parameter type is integer , the value is 0 or 1 . If the type is boolean , the value is true or false .
type	String	Definition Indicates the parameter type. Range The value can be string , integer , boolean , list , or float .
description	String	Definition Indicates the parameter description. Range N/A

- 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](#).

5.18.7 Obtaining Parameters in a Specified Parameter Template

Function

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

- Before calling this API, learn how to [authenticate](#) it.
- 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 5-581 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
config_id	Yes	Definition Specifies the parameter template ID. Constraints N/A Range When this parameter is empty (not space), the URL of the parameter template list is obtained. For details, see Obtaining a Parameter Template List . Default Value N/A

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/configurations/463b4b58-d0e8-4e2b-9560-5dea4552fde9

Response

- Normal response

Table 5-582 Parameters

Parameter	Type	Description
id	String	Definition Indicates the parameter template ID. Range N/A
name	String	Definition Indicates the parameter template name. Range N/A
datastore_version_name	String	Definition Indicates the database version name. Range N/A
datastore_name	String	Definition Indicates the database name. Range N/A
description	String	Definition Indicates the parameter template description. Range N/A
created	String	Definition Indicates the creation time. 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, in the Beijing time zone, the time zone offset is shown as +0800 .

Parameter	Type	Description
updated	String	Definition Indicates the update time. 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, in the Beijing time zone, the time zone offset is shown as +0800 .
configuration_parameters	Array of objects	Definition Indicates the parameters defined by users based on the default parameter templates. For details, see Table 5-583 .

Table 5-583 configuration_parameters field data structure description

Parameter	Type	Description
name	String	Definition Indicates the parameter name. Range N/A
value	String	Definition Indicates the parameter value. Range N/A
restart_required	Boolean	Definition Indicates whether a restart is required. Range false: indicates that a restart is not required. true: indicates that a restart is required.

Parameter	Type	Description
readonly	Boolean	Definition Indicates whether the parameter is read-only. Range • false: indicates that the parameter is not read-only. • true: indicates that the parameter is read-only.
value_range	String	Definition Indicates the parameter value range. Range If the parameter type is integer, the value is 0 or 1. If the type is boolean, the value is true or false.
type	String	Definition Indicates the parameter type. Range The value can be string, integer, boolean, list, or float.
description	String	Definition Indicates the parameter description. Range N/A

- 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](#).

5.18.8 Deleting a Parameter Template

Function

This API is used to delete a specified parameter template.

- Before calling this API, learn how to [authenticate](#) it.
- 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 5-584 Parameters

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

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](#).

5.19 Extension Management (RDS for PostgreSQL)

5.19.1 Creating an Extension

Function

This API is used to create an extension for a specified database.

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.

URI

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

Table 5-585 Parameters

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

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

Request

Table 5-586 Parameters

Parameter	Mandatory	Type	Description
database_name	Yes	String	Definition Database name. Constraints N/A Range N/A Default Value N/A
extension_name	Yes	String	Definition Extension name. Constraints N/A Range N/A Default Value N/A

Example Request

Create the extension **pg_stat_statements** for database **db1**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/f569f1358436479dbcba8603c32cc4aein03/extensions
{
```

```
"database_name" : "db1",  
"extension_name" : "pg_stat_statements"  
}
```

Response

- 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](#).

5.19.2 Querying Extensions

Function

This API is used to obtain extension information of a specified database.

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/extensions?
database_name={database_name}&offset={offset}&limit={limit}
- Parameter description

Table 5-587 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
database_name	Yes	Definition Database name. Constraints N/A Range N/A Default Value N/A
offset	No	Definition Index offset. The query starts from the next piece of data indexed by this parameter. Constraints N/A Range The value must be a non-negative number. Default Value The default value is 0 , indicating that the query starts from the first data record.

Parameter	Mandatory	Description
limit	No	Definition Number of records to be queried. Constraints N/A Range 1–100 Default Value 100

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/f569f1358436479dbcba8603c32cc4aein03/extensions?database_name=db1

Response

- Normal response

Table 5-588 Parameters

Parameter	Type	Description
extensions	Array of objects	Definition Extension list. For details, see Table 5-589 .
total_count	Integer	Definition Total number of extensions. Range N/A

Table 5-589 extensions element structure description

Parameter	Type	Description
name	String	Definition Extension name. Range N/A

Parameter	Type	Description
database_name	String	Definition Database name. Range N/A
version	String	Definition Extension version. Range N/A
version_update	String	Definition New version that the extension can be upgraded to. If the value of this parameter is different from that of version , the extension can be upgraded. Range N/A
shared_preload_libraries	String	Definition Dependent preloaded library. Range N/A
created	Boolean	Definition Whether the extension has been created. Range N/A
description	String	Definition Extension description. Range N/A

- Example normal response

```
{
  "extensions": [ {
    "name": "pg_cron",
    "database_name": "db1",
    "version": "1.0",
    "version_update": "1.0",
    "shared_preload_libraries": "pg_cron",
    "created": false,
    "description": "pg_cron access method - signature file based index"
  }, {
```

```
"name" : "dblink",
"database_name" : "db1",
"version" : "1.2",
"version_update" : "1.2",
"shared_preload_libraries" : "",
"created" : false,
"description" : "connect to other PostgreSQL databases from within a database"
}],
"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](#).

5.19.3 Updating an Extension

Function

This API is used to update an extension on a specified database.

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.

URI

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

Table 5-590 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-591 Parameters

Parameter	Mandatory	Type	Description
database_name	Yes	String	Definition Database name. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
extension_name	Yes	String	Definition Extension name. Constraints N/A Range N/A Default Value N/A

Example Request

Update the extension **pg_stat_statements** for database **db1**.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfsae3435in03/
extensions
{
  "database_name": "db1",
  "extension_name": "pg_stat_statements"
}
```

Response

- 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](#).

5.19.4 Deleting an Extension

Function

This API is used to delete an extension of a specified database.

- Before calling this API, learn how to [authenticate](#) it.

- 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, frozen, or abnormal.

URI

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

Table 5-592 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-593 Parameters

Parameter	Mandator y	Type	Description
database_name	Yes	String	Definition Database name. Constraints N/A Range N/A Default Value N/A
extension_name	Yes	String	Definition Extension name. Constraints N/A Range N/A Default Value N/A

Example Request

```
DELETE https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/extensions
{
  "database_name" : "db1",
  "extension_name" : "pg_stat_statements"
}
```

Response

- 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](#).

5.19.5 Modifying the Value of a Specified Parameter for an Instance

Function

This API is used to modify the value of a specified parameter for an instance.

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

Constraints

- This operation cannot be performed when the DB instance is in the abnormal or frozen state.
- Parameters of read replicas cannot be modified.
- Only the value of **shared_preload_libraries** can be modified.

URI

- URI format
PUT /v3/{project_id}/instances/{instance_id}/parameter/{name}
- Parameter description

Table 5-594 Parameters

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

Parameter	Mandatory	Description
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
name	Yes	Definition Parameter name. Constraints N/A Range Only the shared_preload_libraries parameter can be modified. Default Value shared_preload_libraries

Request

Table 5-595 Parameters

Parameter	Mandatory	Type	Description
value	Yes	String	Definition Parameter value. Constraints N/A Range N/A Default Value N/A

Example Request

Change the value of **shared_preload_libraries** for a DB instance.

```
PUT https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/  
f569f1358436479dbcb8603c32cc4aein03/parameter/shared_preload_libraries
```

```
{  
  "value" : "passwordcheck.so,pg_stat_statements,pg_sql_history"  
}
```

Response

- Normal response

Table 5-596 Parameters

Parameter	Type	Description
job_id	String	Definition Task ID. Range N/A
restart_required	Boolean	Definition Whether a reboot is required. The value can be: Range • true: indicates that a reboot is required. • false: indicates that a reboot is not required.

- Example normal response

```
{  
  "job_id" : "e7a7535b-eb9b-45ac-a83a-020dc5016d94",  
  "restart_required" : 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](#).

5.19.6 Obtaining the Value of a Specified Parameter for an Instance

Function

This API is used to obtain the value of a specified parameter for an instance.

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

Constraints

- This operation cannot be performed when the instance is in the abnormal or frozen state.
- Only the value of **shared_preload_libraries** can be queried.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/parameter/{name}
- Parameter description

Table 5-597 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Description
name	Yes	Definition Parameter name. Constraints N/A Range Only the shared_preload_libraries parameter can be modified. Default Value shared_preload_libraries

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/f569f1358436479dbcba8603c32cc4aein03/parameter/shared_preload_libraries

Response

- Normal response

Table 5-598 Parameters

Parameter	Type	Description
name	String	Definition Parameter name. Range N/A
value	String	Definition Parameter value. Range N/A
restart_required	Boolean	Definition Whether a reboot is required. Range true: A reboot is required. false: A reboot is not required.

Parameter	Type	Description
value_range	String	Definition Parameter value range. Range If the parameter type is integer , the value is 0 or 1 . If the type is boolean , the value is true or false .
type	String	Definition Parameter type. Range The value can be string , integer , boolean , list , or float .
description	String	Definition Parameter description. Range N/A

- Example normal response

```
{
  "name": "shared_preload_libraries",
  "value": "passwordcheck.so,pg_sql_history",
  "restart_required": true,
  "value_range": "passwordcheck.so,pg_stat_statements,pg_sql_history",
  "type": "list",
  "description": "Lists shared libraries to preload into server."
}
```

- 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](#).

5.20 Configuring Replication Delay for a Read Replica (RDS for PostgreSQL)

5.20.1 Obtaining the Delayed Replay Status of WAL Logs

Function

This API is used to obtain the delayed WAL replay status of a read replica.

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

Constraints

- To use this function, contact customer service to obtain required permissions.
- This function is only available to read replicas of RDS for PostgreSQL 12 and later versions.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/replay-delay/show
- Parameter description

Table 5-599 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

- Parameter description
None
- URI example
GET <https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/49b9dd1d6f464ba4bc91df5cbd2e52eb03/replay-delay/show>

Response

- Normal response

Table 5-600 Parameters

Parameter	Type	Description
cur_delay_time_mills	int	Definition Configured delay, in ms. Range The replication delay is controlled by the recovery_min_apply_delay parameter. You can modify this parameter to change the delay for replaying WAL logs. For details about how to modify this parameter, see Modifying Parameters of a Specified Instance .
delay_time_value_range	String	Definition Value range for the delay. Range N/A
real_delay_time_mills	int	Definition Actual delay, in ms. Range N/A
cur_log_replay_paused	boolean	Definition Current log replay status. Range true: The replay is paused. false: The replay is normal.

Parameter	Type	Description
latest_receive_log	String	Definition Latest received log position. Range N/A
latest_replay_log	String	Definition Latest replayed log position. Range N/A

- Example normal response

```
{
  "cur_delay_time_mills" : 0,
  "delay_time_value_range" : "0-2147483647",
  "real_delay_time_mills" : 0,
  "cur_log_replay_paused" : true,
  "latest_receive_log" : "0/8000060",
  "latest_replay_log" : "0/8000060"
}
```

- 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](#).

5.20.2 Querying the Recovery Time Window of WAL Logs

Function

This API is used to query the recovery time window of WAL logs for a read replica. After this API is called, a recovery time window (**recovery_min_time**, **recovery_max_time**] is returned. The interval is left-open and right-closed. You can change the value of **recovery_target_time** to a time point in the time window to set the target replay time. For details about how to modify instance parameters, see [Modifying Parameters of a Specified Instance](#).

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

Constraints

- To use this function, contact customer service to obtain the permission required for configuring replication delay for a read replica.
- This API is available only to read replicas of RDS for PostgreSQL 12 or later.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/recovery-time
- Parameter description

Table 5-601 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints The value cannot be empty. Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints The value cannot be empty. Range N/A Default Value N/A

Request

- Parameter description
None
- URI example
GET https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/49b9dd1d6f464ba4bc91df5cbd2e52eb03/recovery-time

Response

- Normal response

Table 5-602 Parameters

Parameter	Type	Description
recovery_min_time	String	Definition Left boundary of the recovery time window (excluded). Range N/A
recovery_max_time	String	Definition Right boundary of the recovery time window (included). Range N/A

- Example normal response

```
{
  "recovery_min_time" : "2024-08-17 19:17:35+10",
  "recovery_max_time" : "2024-08-20 22:53:28+10"
}
```
- 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](#).

5.20.3 Pausing or Resuming WAL Log Replay

Function

- This API is used to pause or resume WAL replay on a read replica.
- If WAL replay is paused but streaming replication is still in progress, WAL data will continue to be received by the read replica and will eventually fill up the storage. This depends on how long the replay is paused for, how quick WAL logs are generated, and how much available storage there is in your instance.
- Before calling this API, learn how to [authenticate](#) it.

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

Constraints

- To use this function, contact customer service to obtain required permissions.
- This function is only available to read replicas of RDS for PostgreSQL 12 and later versions.

URI

- URI format
PUT /v3/{project_id}/instances/{instance_id}/log-replay/update
- Parameter description

Table 5-603 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

- Parameter description

Table 5-604 Parameters

Parameter	Mandatory	Type	Description
pause_log_replay	Yes	String	Definition Whether to pause or resume WAL replay. Constraints N/A Range • true: Pause WAL replay. • false: Resume WAL replay. • Other values or left blank: No action will be taken. Default Value N/A

- URI example
PUT https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/49b9dd1d6f464ba4bc91df5cbd2e52eb03/log-replay/update
- Example request
Pause WAL replay on a read replica.

```
{
  "pause_log_replay" : "true"
}
```

Response

- Normal response

Table 5-605 Parameters

Parameter	Type	Description
message	String	Definition Calling result. Range Returns operate successfully if the calling is successful.

- Example normal response

```
{
  "message" : "operate successfully"
}
```
- 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](#).

5.20.4 Querying the Databases That Can Be Restored to the Primary DB Instance from a Read Replica

Function

This API is used to query the databases that can be restored to the primary DB instance from a read replica.

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

Constraints

- To use this function, contact customer service.
- This API is available only to read replicas of RDS for PostgreSQL 12 or later.

URI

- URI format
GET /v3/{project_id}/instances/{instance_id}/log-replay/database
- Parameter description

Table 5-606 Parameters

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

Parameter	Mandatory	Description
instance_id	Yes	Definition ID of the instance to be queried. Constraints N/A Range N/A Default Value N/A

Request Parameters

None

Example Request

Query the databases that can be restored to the primary DB instance from a read replica.

```
GET https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/e28979107ed04d3b8b2f1b819b8d2be3in03/log-replay/database
```

Response

- Normal response

Table 5-607 Parameters

Parameter	Type	Description
database_limit	Integer	Definition Maximum number of databases that can be returned each time. Range N/A
total_tables	Integer	Definition Total number of returned tables. Range N/A
table_limit	Integer	Definition Maximum number of tables that can be returned each time. Range N/A

Parameter	Type	Description
databases	Array of objects	Definition Databases that can be restored to the primary instance. For details, see Table 5-608 .

Table 5-608 databases field data structure description

Parameter	Type	Description
name	String	Definition Database name. Range N/A
total_tables	Integer	Definition Total number of tables in the database. Range N/A
schemas	Array of objects	Definition Schemas in the database. For details, see Table 5-609 .

Table 5-609 schemas field data structure description

Parameter	Type	Description
name	String	Definition Schema name. Range N/A
total_tables	Integer	Definition Total number of tables in the schema. Range N/A
tables	Array of objects	Definition Tables in the schema. For details, see Table 5-610 .

Table 5-610 tables field data structure description

Parameter	Type	Description
name	String	Definition Table name. Range N/A

- Example normal response

```
{
  "databases": [ {
    "name": "postgres",
    "schemas": [ ],
    "total_tables": 0
  } ],
  "database_limit": 2000,
  "table_limit": 20000,
  "total_tables": 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](#).

5.20.5 Restoring a Database from a Read Replica to the Primary DB Instance

Function

This API is used to restore a database from a read replica to the primary DB instance.

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

Constraints

- To use this function, contact customer service.
- This API is available only to read replicas of RDS for PostgreSQL 12 or later.

URI

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

Table 5-611 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition ID of the instance to be queried. Constraints N/A Range N/A Default Value N/A

Request Parameters

Table 5-612 Parameters

Parameter	Mandatory	Type	Description
databases	Yes	Array of objects	Definition Databases to be restored. For details, see Table 5-613 . Constraints N/A Range N/A Default Value N/A

Table 5-613 databases field data structure description

Parameter	Mandatory	Type	Description
old_name	Yes	String	Definition Name of the original database to be restored. Constraints N/A Range N/A Default Value N/A
new_name	Yes	String	Definition Name of the new database after the restoration. Constraints N/A Range N/A Default Value N/A

Example Request

Restore a database from a read replica to the primary DB instance.

```
POST https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/794c38e5309344818f4b33b86ebce9b4in03/log-replay/database

{
  "databases": [ {
    "old_name": "old",
    "new_name": "new"
  } ]
}
```

Response

- Normal response

Table 5-614 Parameters

Parameter	Type	Description
job_id	String	Definition Task flow ID. Range N/A

- Example normal response


```
{
  "job_id": "8465d1fb-20a8-48e6-9c9b-3d1958ecbb9e"
}
```
- 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](#).

5.21 Recycling a DB Instance

5.21.1 Modifying Recycling Policy

Function

This API is used to modify the recycling policy for the recycle bin.

- Before calling this API, learn how to [authenticate](#) it.

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

URI

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

Table 5-615 Parameters

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

Request

Table 5-616 Parameters

Parameter	Mandatory	Type	Description
recycle_policy	Yes	Object	Definition Each element is associated with the recycle bin. For details on the element structure, see Table 5-617 . Constraints N/A

Table 5-617 recycle_policy elements

Parameter	Mandatory	Type	Description
retention_period_in_days	No	String	Definition Retention days of deleted instances. Constraints N/A Range The value is an integer ranging from 1 to 7. Default Value If this parameter is left blank, the retention period is 7 days by default.

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 5-618 Parameters

Parameter	Type	Description
result	String	Definition Calling result. 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](#).

5.21.2 Querying the Recycling Policy

Function

This API is used to query the recycling policy of the recycle bin.

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

URI

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

Table 5-619 Parameters

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

Request

- Parameter description
None
- URI example

GET https://rds.ap-southeast-1.myhuaweicloud.com/v3/054ea741f700d4a32f1bc00f5c80dd4c/instances/recycle-policy

Response

- Normal response

Table 5-620 Parameters

Parameter	Type	Description
retention_period_in_days	Integer	Definition Number of days for retaining instances in the recycle bin. Range N/A

- 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](#).

5.21.3 Querying Instances in the Recycle Bin

Function

This API is used to query instances in the recycle bin.

- Before calling this API, learn how to [authenticate](#) it.
- 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 5-621 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID. Constraints N/A Range N/A Default Value N/A
offset	Yes	Definition Index offset. The query starts from the next piece of data indexed by this parameter. Constraints N/A Range The value must be a non-negative number. Default Value N/A
limit	Yes	Definition Number of records on each page. Constraints N/A Range [1, 50] Default Value N/A

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 5-622 Parameters

Parameter	Type	Description
total_count	Integer	Definition Number of data records in the recycle bin. Range N/A
instances	Array of objects	Definition Instance information. For details, see Table 5-623 .

Table 5-623 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. • 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

Parameter	Type	Description
pay_model	String	Definition Billing mode. Range 0 : pay-per-use billing 1 : yearly/monthly billing
created_at	String	Definition Creation time. 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 .
deleted_at	String	Definition Deletion time. 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 .
volume_type	String	Definition Storage type. Range ● ULTRAHIGH: ultra-high I/O storage. ● ULTRAHIGHPRO: ultra-high I/O (advanced) storage. This storage type is supported only with ultra-high performance (advanced) instances (permission required). ● CLOUDSSD: cloud SSD storage. This storage type is supported only with general-purpose and dedicated instances. ● LOCALSSD: local SSD storage.

Parameter	Type	Description
volume_size	Integer	Definition Storage space. Range 40–4000, in GB. The value must be a multiple of 10. If you want to create an instance with storage space up to 6,000 GB or scale the storage up to 10,000 GB, contact customer service to apply for required permissions. This parameter is invalid for read replicas. The storage space of a read replica is the same as that of the primary instance by default.
data_vip	String	Definition Floating IP address. Range N/A
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

Parameter	Type	Description
recycle_status	String	Definition Backup status. Range ● BUILDING: The instance is being backed up and cannot be rebuilt. ● COMPLETED: The backup is complete and the instance can be rebuilt.
is_serverless	Boolean	Definition Instance type. Range ● true: serverless ● false: non-serverless

- Example normal response

```
{
  "total_count" : 2,
  "instances" : [ {
    "id" : "b7dea08c0f0e4fed9f1951fff9013639in01",
    "name" : "rds-8b86",
    "ha_mode" : "Ha",
    "engine_name" : "mysql",
    "engine_version" : "5.7.38",
    "pay_model" : "0",
    "created_at" : "2022-12-26T03:38:10+0000",
    "deleted_at" : "2023-01-09T08:57:10+0000",
    "volume_type" : "SSD",
    "volume_size" : 80,
    "data_vip" : "192.168.226.188",
    "enterprise_project_id" : "0",
    "retained_until" : "2023-01-16T09:20:48+0000",
    "recycle_backup_id" : "e8e3c329c20442f5aec21b95a8cdaa52br01",
    "recycle_status" : "COMPLETED",
    "is_serverless" : false
  }, {
    "id" : "cc6d0dff4a9145d0a1335c35a866de23in01",
    "name" : "rds-82b2",
    "ha_mode" : "Ha",
    "engine_name" : "mysql",
    "engine_version" : "5.7.38",
    "pay_model" : "0",
    "created_at" : "2022-12-26T06:17:58+0000",
    "deleted_at" : "2023-01-09T08:56:49+0000",
    "volume_type" : "SSD",
    "volume_size" : 200,
    "data_vip" : "192.168.2.24",
    "enterprise_project_id" : "0",
    "retained_until" : "2023-01-16T09:20:45+0000",
    "recycle_backup_id" : "3f35a348ae0943979bd302a9788f49e7br01",
    "recycle_status" : "COMPLETED",
    "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](#).

5.22 Tag Management

5.22.1 Adding Tags in Batches

Function

This API is used to add tags in batches.

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

URI

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

Table 5-624 Parameters

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

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

Request

Table 5-625 Parameters

Parameter	Mandatory	Type	Description
action	Yes	String	Definition Operation identifier. Constraints N/A Range The value is case-sensitive and is create for tag creation. Default Value N/A
tags	Yes	Array of objects	Definition Tag list. A maximum of 20 tags can be added for each instance. For details, see Table 5-626 . Constraints N/A

Table 5-626 tags field data structure description

Parameter	Mandatory	Type	Description
key	Yes	String	Definition Tag key. Constraints N/A 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> . Default Value N/A
value	Yes	String	Definition Tag value. Constraints N/A 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> . Default Value N/A

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](#).

5.22.2 Deleting Tags in Batches

Function

This API is used to delete tags in batches.

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

URI

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

Table 5-627 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

Table 5-628 Parameters

Parameter	Mandatory	Type	Description
action	Yes	String	Definition Operation identifier. Constraints N/A Range The value is case-sensitive and is delete for tag deletion. Default Value N/A

Parameter	Mandatory	Type	Description
tags	Yes	Array of objects	Definition Tag list. For details, see Table 5-629 . Constraints N/A

Table 5-629 tags field data structure description

Parameter	Mandatory	Type	Description
key	Yes	String	Definition Tag key. Constraints N/A 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> . Default Value N/A
value	No	String	Definition Tag value. Constraints N/A 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> . Default Value N/A

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](#).

5.22.3 Querying Project Tags

Function

This API is used to query project tags.

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

URI

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

Table 5-630 Parameters

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

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/tags

Response

- Normal response

Table 5-631 Parameters

Parameter	Type	Description
tags	Array of objects	Definition Specifies the tag list. If there is no tag in the list, an empty array is returned. For details, see Table 5-632 .

Table 5-632 tags field data structure description

Parameter	Type	Description
key	String	Definition Specifies the tag key. Range N/A

Parameter	Type	Description
values	List<String>	Definition Specifies the tag 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](#).

5.22.4 Querying Tags of a DB Instance

Function

This API is used to query tags of a DB instance.

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

URI

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

Table 5-633 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A

Request

- Request parameters
None
- URI example
GET <https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/ab67f50938cb4d189cc2163ca0098fe7in03/tags>

Response

- Normal response

Table 5-634 Parameters

Parameter	Type	Description
tags	Array of objects	Definition Tag list. If there is no tag added for the instance, an empty array is returned. For details, see Table 5-635 .

Table 5-635 tags field data structure description

Parameter	Type	Description
key	String	Definition Tag key. Range N/A
value	String	Definition Tag value. Range N/A
tag_type	String	Definition Tag type. Range Enumerated values: user and system

- Example normal response

```
{
  "tags": [{
    "key": "keyName",
    "value": "keyValue",
    "tag_type": "user"
  }]
}
```

- 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](#).

5.23 Quota Management

5.23.1 Querying Resource Quotas

Function

This API is used to query resource quotas in a project.

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

URI

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

Table 5-636 Parameters

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

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/quotas

Response

- Normal response

Table 5-637 Parameters

Parameter	Type	Description
quotas	Object	Definition Specifies the objects in the quota list. For details, see Table 5-638 .

Table 5-638 quotas field data structure description

Parameter	Type	Description
resources	Array of objects	Definition Indicates the resource list objects. For details, see Table 5-639 .

Table 5-639 resources field data structure description

Parameter	Type	Description
quota	Integer	Definition Indicates the project resource quota. Range N/A
used	Integer	Definition Indicates the number of used resources. Range N/A
type	String	Definition Indicates the project resource type. 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](#).

5.24 Obtaining Task Information

5.24.1 Querying Scheduled Tasks

Function

This API is used to query scheduled tasks.

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

URI

- URI format
GET /v3/{*project_id*}/schedule-tasks?
offset={offset}&limit={limit}&instance_name={instance_name}&instance_id={i
nstance_id}&status={status}&start_time={start_time}&end_time={end_time}
- Parameter description

Table 5-640 Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID. Constraints N/A Range N/A Default Value N/A
offset	No	Integer	Definition Index offset. Constraints N/A Range The query starts from the next piece of data indexed by this parameter. The value must be a number and cannot be a negative number. Default Value 0: The query starts from the first data record.
limit	No	Integer	Definition Number of records returned by a query. Constraints N/A Range The value must be a positive integer ranging from 1 to 50. Default Value 10

Parameter	Mandatory	Type	Description
instance_id	No	String	Definition Instance ID, which can be used for filtering. Constraints N/A Range N/A Default Value N/A
instance_name	No	String	Definition Instance name, which can be used for filtering. Constraints N/A Range N/A Default Value N/A
status	No	String	Definition Task status, which can be used for filtering. Constraints N/A Range • Initing: The task is being initialized. • Pending: The task is pending. • Running: The task is running. • Completed: The task is complete. • Failed: The task failed. • Unauthorized: The task is unauthorized. • Canceled: The task is canceled. Default Value N/A

Parameter	Mandatory	Type	Description
start_time	No	String	Definition Task start time. Constraints If start_time is specified, end_time is mandatory. The value is in the UTC timestamp format. Range N/A Default Value N/A
end_time	No	String	Definition Task end time. Constraints If start_time is specified, end_time is mandatory. The value is in the UTC timestamp format. Range N/A Default Value N/A

Request

None

Example Request

```
GET https://{Endpoint}/v3/54623db08b174c858ba779d2aa7923a3/schedule-tasks?offset=1&limit=3&instance_id=43e4feaab48f11e89039fa163ebaa7e4in04&instance_name=sqlserver_instance&start_time=1747919701390&end_time=1748524501390
```

Response

- Normal response

Table 5-641 Parameters

Parameter	Type	Description
schedule_tasks	Array of objects	Definition Scheduled task list. For details, see Table 5-642 .

Parameter	Type	Description
total_count	Integer	Definition Total number of tasks. Range N/A

Table 5-642 schedule_tasks field description

Parameter	Type	Description
id	String	Definition Task ID. Range N/A
name	String	Definition Task name. Range N/A
instance_id	String	Definition Instance ID. Range N/A
instance_name	String	Definition Instance name. Range N/A

Parameter	Type	Description
instance_status	String	Definition Instance status. Range • BUILD: The instance is being created. • CREATE FAIL: The instance failed to be created. • ACTIVE: The instance is normal. • FAILED: The instance is abnormal. • FROZEN: The instance is frozen. • MODIFYING: The instance is being scaled up. • REBOOTING: The instance is being rebooted. • RESTORING: The instance is being restored. • MODIFYING INSTANCE TYPE: The instance is being changed to primary/standby. • SWITCHOVER: A primary/standby switchover is being performed. • MIGRATING: The instance is being migrated. • BACKING UP: The instance is being backed up. • MODIFYING DATABASE PORT: The database port is being changed. • STORAGE FULL: The instance storage is full.
project_id	String	Definition Project ID. Range N/A

Parameter	Type	Description
create_time	String	Definition Task creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800. Range N/A
start_time	String	Definition Planned task 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. For example, in the Beijing time zone, the time zone offset is shown as +0800. Range N/A
end_time	String	Definition Planned task end time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800. Range N/A
order	String	Definition Task priority. Range An integer ranging from 1 to 100. A smaller value indicates a higher priority.

Parameter	Type	Description
status	String	Definition Task status. Range • Initing: The task is being initialized. • Pending: The task is pending. • Running: The task is running. • Completed: The task is complete. • Failed: The task failed. • Unauthorized: The task is unauthorized. • Canceled: The task is canceled. • Deleted: The task is deleted.
datastore_type	String	Definition Database type. Range N/A
volume_type	String	Definition Storage type. Range N/A
target_config	object	Definition Target configuration. For details, see Table 5-643 .

Table 5-643 target_config

Parameter	Type	Description
flavor	String	Definition Instance class. Range If name is set to RESIZE_FLAVOR , this parameter indicates the target instance class.

Parameter	Type	Description
cpu	String	Definition Instance vCPUs. Range If name is set to RESIZE_FLAVOR , this parameter indicates the target vCPUs.
mem	String	Definition Instance memory. Range If name is set to RESIZE_FLAVOR , this parameter indicates the target memory.

- Example normal response

```
{
  "schedule_tasks" : [
    {
      "id" : "5ed6a9e95f2747f7bac1b5899ddd1316",
      "instance_id" : "3d2929b2c7ea4fe9bd27f21061d037ccin01",
      "instance_name" : "rds-zfs-test-56-44",
      "instance_status" : "ACTIVE",
      "project_id" : "54623db08b174c858ba779d2aa7923a3",
      "name" : "RESIZE_FLAVOR",
      "create_time" : "2020-07-15T07:46:10+0000",
      "start_time" : "2020-07-15T08:46:10+0000",
      "end_time" : "2020-07-15T09:46:10+0000",
      "order" : "1",
      "status" : "Canceled",
      "datastore_type" : "mysql",
      "target_config" : {
        "flavor" : "rds.mysql.n1.xlarge.2",
        "mem" : "8",
        "cpu" : "4"
      },
      "volume_type" : "CLOUDSSD"
    }
  ],
  "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](#).

5.24.2 Querying Instant Tasks

Function

This API is used to query instant tasks.

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

URI

- URI format
GET /v3/{*project_id*}/tasklist?
offset={offset}&limit={limit}&id={id}&instance_id={instance_id}&order_id={order_id}&name={name}&status={status}&start_time={start_time}&end_time={end_time}
- Parameter description

Table 5-644 Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
offset	No	Integer	Definition Index offset. Constraints N/A Range The query starts from the next piece of data indexed by this parameter. The value must be a number and cannot be a negative number. Default Value 0 : The query starts from the first data record.

Parameter	Mandatory	Type	Description
limit	No	Integer	Definition Number of records returned by a query. Constraints N/A Range The value must be a positive integer ranging from 1 to 50. Default Value 10
id	No	String	Definition Task ID, which can be used for filtering. Constraints N/A Range N/A Default Value N/A
instance_id	No	String	Definition Instance ID, which can be used for filtering. Constraints N/A Range N/A Default Value N/A
order_id	No	String	Definition Order ID, which can be used for filtering. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
name	No	String	Definition Task name, which can be used for filtering. Constraints N/A Range N/A Default Value N/A
status	No	String	Definition Task status, which can be used for filtering. Constraints N/A Range • Running: The task is running. • Completed: The task is complete. • Failed: The task failed. Default Value N/A
start_time	No	String	Definition Task creation time, which can be used for filtering. Constraints If start_time is specified, end_time is mandatory. The value is in the UTC timestamp format. Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
end_time	No	String	Definition Task end time, which can be used for filtering. Constraints If start_time is specified, end_time is mandatory. The value is in the UTC timestamp format. Range N/A Default Value N/A

Request

None

Example Request

```
GET https://{Endpoint}/v3/54623db08b174c858ba779d2aa7923a3/tasklist?offset=1&limit=3&start_time=1747919701390&end_time=1748524501390
```

Response

- Normal response

Table 5-645 Parameters

Parameter	Type	Description
total_count	Integer	Definition Total number of tasks. Range N/A
actions	Array of strings	Definition List of task names. Range N/A
tasks	Array of objects	Definition Task list. For details, see Table 5-646 .

Table 5-646 tasks field description

Parameter	Type	Description
id	String	Definition Task ID. Range N/A
name	String	Definition Task name. Range N/A
instance_id	String	Definition Instance ID. Range N/A
instance_name	String	Definition Instance name. Range N/A

Parameter	Type	Description
instance_status	String	Definition Instance status. Range • BUILD: The instance is being created. • CREATE FAIL: The instance failed to be created. • ACTIVE: The instance is normal. • FAILED: The instance is abnormal. • FROZEN: The instance is frozen. • MODIFYING: The instance is being scaled up. • REBOOTING: The instance is being rebooted. • RESTORING: The instance is being restored. • MODIFYING INSTANCE TYPE: The instance is being changed to primary/standby. • SWITCHOVER: A primary/standby switchover is being performed. • MIGRATING: The instance is being migrated. • BACKING UP: The instance is being backed up. • MODIFYING DATABASE PORT: The database port is being changed. • STORAGE FULL: The instance storage is full.
order_id	String	Definition Order ID. Range N/A
process	String	Definition Task progress, in percentage. Range 0–100. If the task is in the Completed or Failed status, the value is an empty string.

Parameter	Type	Description
fail_reason	String	Definition Failure cause. Range N/A
create_time	String	Definition Task creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 . Range N/A
end_time	String	Definition Planned task end time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 . Range N/A
status	String	Definition Task status. Range • Running: The task is running. • Completed: The task is complete. • Failed: The task failed.

- Example normal response

```
{
  "tasks": [ {
    "id": "676e9f17f9b74289883a44a47b8101f5",
    "name": "RestoreSqlServerInInstance",
    "instance_id": "4d00c7e9d22145deb889937a72b59c8ein01",
    "instance_name": "rds-local-scale",
    "instance_status": "FAILED",
    "order_id": "CS2506041000FOJXC",
    "process": "",
    "create_time": "2020-07-15T07:46:10+0000",
    "end_time": "2020-07-15T09:46:10+0000",
    "status": "Completed"
  } ]
}
```

```
} ],
"actions" : [ "RestoreSqlServerInInstance" ],
"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](#).

5.24.3 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 this API, learn how to [authenticate](#) it.
- 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, restoring data to a new DB instance, migrating a standby RDS for MySQL DB instance to another AZ, upgrading a minor version of an RDS for MySQL DB instance, restoring table data to a specified time point for an RDS for MySQL DB instance, and changing an instance class.

URI

- URI format
GET /v3/{project_id}/jobs?id={id}
- Parameter description

Table 5-647 Parameters

Parameter	Mandatory	Description
project_id	Yes	Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID . Constraints N/A Range N/A Default Value N/A
id	Yes	Definition Task ID. Constraints N/A Range N/A Default Value N/A

Request

- Request parameters
None
- URI example
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/jobs?id=a9767ede-fe0f-4888-9003-e843a4c90514

Response

- Normal response

Table 5-648 Parameters

Parameter	Type	Description
job	Object	Definition Indicates the task information. For details, see Table 5-649 .

Table 5-649 job field data structure description

Parameter	Type	Description
id	String	Definition Indicates the job ID. Range N/A
name	String	Definition Indicates the task name. Range N/A
status	String	Definition Indicates the task execution status. Range • Running: The task is being executed. • Completed: The task is successfully executed. • Failed: The task fails to be executed.
created	String	Definition Indicates the creation time. 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, in the Beijing time zone, the time zone offset is shown as +0800 .
ended	String	Definition Indicates the end time. 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, in the Beijing time zone, the time zone offset is shown as +0800 .

Parameter	Type	Description
process	String	Definition Indicates the task execution progress. Range The execution progress (such as "60%") is displayed only when the task is being executed. Otherwise, "" is returned.
instance	Object	Definition Indicates information of the DB instance on which the task is executed. For details, see Table 5-650 .
entities	Object	Definition The displayed information varies depending on the tasks. For details, see Table 5-651 . NOTE For asynchronous tasks without the entities field description, {} is returned.
fail_reason	String	Definition Indicates the error information displayed when a task failed. Range N/A

Table 5-650 instances field data structure description

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

Table 5-651 entities field data structure description

Parameter	Type	Description
instance	Object	Definition Indicates the information required for creating an instance, changing a single instance to primary/standby, or creating a read replica. For details, see Table 5-652 .
resource_ids	Array of strings	Definition Indicates the queried resource ID. Range N/A
volume	Object	Definition Indicates the information about the resized disk. For details, see Table 5-654 .
public_ip	String	Definition Indicates the EIP bound to the DB instance. Range N/A
switch_strategy	String	Definition Indicates the primary/standby switchover policy. Range N/A

Table 5-652 entities.instance field data structure description

Parameter	Type	Description
endpoint	String	Definition Indicates the DB instance connection address. Range N/A

Parameter	Type	Description
type	String	Definition Indicates the DB instance type. Range • Single: single-node instance • Ha: primary/standby instance • Replica: read replica
datastore	Object	Definition Indicates the database information. For details, see Table 5-653 .
replica_of	String	Definition Indicates the primary DB instance ID. This parameter is returned only when a read replica is created. Range N/A

Table 5-653 datastore field data structure description

Parameter	Type	Description
type	String	Definition Indicates the DB engine. Range N/A
version	String	Definition Indicates the database version. Range N/A

Table 5-654 volume field data structure description

Parameter	Type	Description
type	String	Definition Indicates the volume type. Range N/A

Parameter	Type	Description
original_size	String	Definition Indicates the original volume size in GB. Range N/A
target_size	String	Definition Indicates the target volume size in GB. 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",
    "ended": "2018-08-06T16:41:14+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",
    "ended": "2018-08-06T16:41:14+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",
    "ended": "2018-08-06T16:41:14+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",
    "ended": "2018-08-06T16:41:14+0000",
    "process": "",
    "instance": {
      "id": "a48e43ff268f4c0e879652d65e63d0fbin01",
      "name": "DO-NOT-TOUCH-mgr2-mysql-single"
    },
    "entities": {}
  }
}

```

Task being executed:

```

{
  "job": {
    "id": "31 b8ae23 - c687 - 4 d80 - b7b4 - 42 a66c9bb886",
    "name": "CreateMysqlSingleHAInstance", "status": "Running",
    "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",
    "ended": "2018-08-06T16:41:14+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."
  }
}

{
  "job": {
    "id": "31 b8ae23 - c687 - 4 d80 - b7b4 - 42 a66c9bb886",
    "name": "CreatePostgresqlSingleHAInstance",
    "status": "Failed",
    "created": "2018-08-06T10:41:14+0000",
    "ended": "2018-08-06T16:41:14+0000",
    "process": "",
    "instance": {
      "id": "a48e43ff268f4c0e879652d65e63d0fbin01",
      "name": "DO-NOT-TOUCH-mgr2-postgresql-single"
    },
    "entities": {
      "instance": {
        "type": "Single",
        "datastore": {
          "type": "postgresql",
          "version": "9.6"
        }
      }
    },
    "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](#).

5.24.4 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 this API, learn how to [authenticate](#) it.
- 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 5-655 Parameters

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

Parameter	Mandatory	Description
instance_id	Yes	Definition Instance ID. Constraints N/A Range N/A Default Value N/A
start_time	Yes	Definition Start time in the UTC timestamp format. Constraints N/A Range N/A Default Value N/A
end_time	No	Definition End time in the UTC timestamp format. Constraints N/A Range N/A Default Value N/A

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 5-656 Parameters

Parameter	Type	Description
jobs	Object	Definition Indicates the task information. For details, see Table 5-657 .
count	Integer	Definition Indicates the total number of tasks. Range N/A

Table 5-657 jobs field data structure description

Parameter	Type	Description
id	String	Definition Indicates the task ID. Range N/A
name	String	Definition Indicates the task name. Range N/A
status	String	Definition Indicates the task execution status. Range • Running: The task is being executed. • Completed: The task is successfully executed. • Failed: The task fails to be executed.

Parameter	Type	Description
created	String	Definition Indicates the creation time. 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, in the Beijing time zone, the time zone offset is shown as +0800.
ended	String	Definition Indicates the end time. 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, in the Beijing time zone, the time zone offset is shown as +0800.
process	String	Definition Indicates the task execution progress. 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.
instance	Object	Definition Indicates information of the DB instance on which the task is executed. For details, see Table 5-658.

Parameter	Type	Description
task_detail	String	Definition The displayed information varies depending on the tasks. For details, see the following: • Table 5-659 • Table 5-660 NOTE This field is not displayed for asynchronous tasks that do not contain the task_detail field.
fail_reason	String	Definition Indicates the error information displayed when a task failed. Range N/A
entities	Object	Definition The displayed information varies depending on the tasks. Range N/A

Table 5-658 instance field data structure description

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

Table 5-659 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	Definition Indicates the ID of the original DB instance to which backup data is restored. Range N/A
targetInstanceId	String	Definition Indicates the ID of the target DB instance to which backup data is restored. Range N/A
backupId	String	Definition Indicates the backup file ID. Range N/A
restoreTime	String	Definition Indicates the time point to which table-level data is restored. Range N/A
type	String	Definition Indicates the task type. Range N/A
dbNames	List<String>	Definition Indicates the database name. Range N/A

Table 5-660 task_detail field data structure description (creating automated or manual backups)

Parameter	Type	Description
instanceId	String	Definition Indicates the ID of the DB instance to be backed up. Range N/A
name	String	Definition Indicates the task name. Range N/A
description	String	Definition Indicates the task description. Range N/A
dbName	String	Definition Indicates the name of the data to be backed up. Range N/A

 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-99f5-7cfefa21c37a",
      "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\", \"dbNames\": \"backe\", \"sourceInstanceId\": \"9a09052dfa824caea36f583bc3e5684ein04\", \"targetInstanceId\": \"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 Historical APIs

6.1 API v3

6.1.1 Querying API Versions

Function

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

This API will be unavailable on March 31, 2025. You are advised to switch workloads to the new API ([Querying API Versions](#)) before then.

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

URI

- URI format
GET /rds
- Parameter description
None

Request

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

Response

- Normal response

Table 6-1 Parameters

Parameter	Type	Description
versions	Array of objects	Indicates the list of detailed API version information. For details, see Table 6-2 .

Table 6-2 versions field data structure description

Parameter	Type	Description
id	String	Indicates the API version. Valid values: • v1: indicates the API v1 version. • v3: indicates the API v3 version.
links	Array of objects	Indicates the API link information. The value is empty when the version is v1 or v3. For details, see Table 6-3 .
status	String	Indicates the version status. • CURRENT: indicates that the version is recommended. • DEPRECATED: indicates a deprecated version which may be deleted later.

Parameter	Type	Description
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 6-3 links field data structure description

Parameter	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": "2019-01-15T12:00:00Z"
  },
  {
    "id": "v1",
    "links": [],
    "status": "DEPRECATED",
    "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](#).

6.1.2 Upgrading a Minor Version

Function

This API is used to upgrade minor versions of RDS for MySQL or RDS for PostgreSQL instances.

This API will be unavailable on September 14, 2025. You are advised to switch workloads to the new API ([Upgrading the Minor Version of a DB Instance](#)) before then.

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

Constraints

This API is supported for MySQL and PostgreSQL DB engines.

The constraints on minor version upgrades for RDS for PostgreSQL are as follows:

- The minor version cannot be upgraded for instances with abnormal nodes.
- The following minor versions cannot be upgraded:
 - Versions earlier than 11.2 for RDS for PostgreSQL 11
 - The upgrade will be performed immediately upon the submission of your request. Delayed upgrade of minor versions is not supported.

URI

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

Table 6-4 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

Parameter description

Table 6-5 Parameters

Parameter	Mandatory	Type	Description
delay	No	Boolean	Whether to delay the upgrade until the maintenance window. • true: Delay the upgrade. The instance will be upgraded during the specified maintenance window. • false: Upgrade the instance immediately (default value).

Example Request

Upgrading the minor version of a DB instance

```
POST https://{endpoint}/v3/054ea741f700d4a32f1bc00f5c80dd4c/instances/5b409baece064984a1b3eef6addae50cin01/action/db-upgrade
{
  "delay":false
}
```

Response

- Normal response

Table 6-6 Parameters

Parameter	Type	Description
job_id	String	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](#).

6.1.3 Applying a Parameter Template

Function

This API is used to apply a parameter template to one or more DB instances.

This API will be unavailable on March 31, 2025. You are advised to switch workloads to the new API ([Applying a Parameter Template](#)) before then.

- Before calling this API, learn how to [authenticate](#) it.
- 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/{*project_id*}/configurations/{*config_id*}/apply
- Parameter description

Table 6-7 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
config_id	Yes	Parameter template ID.

Request

Parameter description

Table 6-8 Parameters

Parameter	Mandatory	Type	Description
instance_ids	Yes	Array of strings	Instance IDs.

Example Request

```
https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/configurations/463b4b58-  
d0e8-4e2b-9560-5dea4552fde9/apply  
{
```

```
"instance_ids": ["73ea2bf70c73497f89ee0ad4ee008aa2in01", "fe5f5a07539c431181fc78220713aebein01"]
}
```

Response

- Normal response

Table 6-9 Parameters

Parameter	Type	Description
configuration_id	String	Parameter template ID.
configuration_name	String	Parameter template name.
apply_results	Array of objects	Result of applying the parameter template. For details, see Table 6-10 .
success	Boolean	Whether the parameter template is applied to all requested DB instances successfully. • 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	Task ID.

Table 6-10 apply_results field data structure description

Parameter	Type	Description
instance_id	String	Instance ID.
instance_name	String	Instance name.
restart_required	Boolean	Whether a reboot is required. • true: A reboot is required. • false: A reboot is not required.

Parameter	Type	Description
success	Boolean	Whether the parameter template is applied to the DB instance successfully. • true: The application was successful. • false: The application failed.

- Example normal response

```
{
  "configuration_id": "cf49bbd7d2384878bc3808733c9e9d8bpr01",
  "configuration_name": "paramsGroup-bcf9",
  "job_id": "e4942c94-9d66-458e-beb7-90601664641e",
  "apply_results": [{
    "instance_id": "fe5f5a07539c431181fc78220713aebein01",
    "instance_name": "zyy1",
    "restart_required": false,
    "success": false
  }, {
    "instance_id": "73ea2bf70c73497f89ee0ad4ee008aa2in01",
    "instance_name": "zyy2",
    "restart_required": false,
    "success": false
  }],
  "success": 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](#).

6.1.4 Modifying Parameters of a Specified DB Instance

Function

This API is used to modify parameters in the parameter template of a specified DB instance.

This API will be unavailable on March 31, 2025. You are advised to switch workloads to the new API ([Modifying Parameters of a Specified Instance](#)) before then.

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

Constraints

- The following DB engines are supported: MySQL, PostgreSQL, and Microsoft SQL Server.
- 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*.
- Modifying sensitive parameters, for example, **lower_case_table_names**, is risky. For details, see "[Suggestions on RDS for MySQL Parameter Tuning](#)" in the *Relational Database Service User Guide*.

URI

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

Table 6-11 Parameters

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Parameter description

Table 6-12 Parameters

Parameter	Mandatory	Type	Description
values	Yes	Map<String,String>	Specifies the parameter values defined by users based on the default parameter templates. • 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 empty, the parameter value cannot be empty, either.

Request example

- RDS for MySQL

```
https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfsdae3435in01/configurations
```

```
{
  "values" : {
    "max_connections" : "10",
    "autocommit" : "OFF",
    "binlog_checksum" : "CRC32",
    "innodb_purge_threads" : "4"
  }
}
```

- RDS for PostgreSQL

```
{
  "values" : {
    "max_connections" : "10",
    "autovacuum" : "on",
    "bytea_output" : "escape",
    "client_encoding" : "UTF8",
    "cpu_tuple_cost" : "0.01"
  }
}
```

Response

- Normal response

Table 6-13 Parameters

Parameter	Type	Description
job_id	String	Task ID.

Parameter	Type	Description
restart_required	Boolean	Indicates whether a reboot is required. • true: A reboot is required. • false: A reboot is not required.
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

```
{
  "job_id" : "e7a7535b-eb9b-45ac-a83a-020dc5016d94",
  "restart_required" : "false",
  "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](#).

6.1.5 Restoring Data to an Existing DB Instance

Function

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

This API will be unavailable on March 31, 2025. You are advised to switch workloads to the new API ([Restoring Data to an Existing DB Instance](#)) before then.

- Before calling this API, learn how to [authenticate](#) it.

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

Constraints

- Microsoft SQL Server supports batch calling of this API to restore one database to an existing DB instance.
- This API does not support RDS for PostgreSQL instance restoration.
- 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.
 - The target DB instance version must be later than or equal to that of the source instance. For example, MySQL 5.7.25 DB instance can be restored to MySQL 5.7.27 DB instance. For constraints of Microsoft SQL Server, see [Table 6-14](#).
 - For RDS for MySQL, the total storage space of the target DB instance must be greater than or 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.
- When data is restored to an original DB instance:
This API is supported only for MySQL and Microsoft SQL Server DB engines.

Table 6-14 Restoring to the DB engine versions supported by RDS for SQL Server

Original DB Engine Version	Restore To
2008 Standard Edition	2008 Standard Edition
2012 Web Edition	2012 Web Edition 2012 Standard Edition 2012 Enterprise Edition
2012 Standard Edition	2012 Standard Edition 2012 Enterprise Edition
2012 Enterprise Edition	2012 Enterprise Edition
2014 Standard Edition	2014 Standard Edition 2014 Enterprise Edition
2014 Enterprise Edition	2014 Enterprise Edition
2016 Standard Edition	2016 Standard Edition 2016 Enterprise Edition
2016 Enterprise Edition	2016 Enterprise Edition

Original DB Engine Version	Restore To
2017 Web Edition	2017 Web Edition 2017 Standard Edition 2017 Enterprise Edition
2017 Standard Edition	2017 Standard Edition 2017 Enterprise Edition
2017 Enterprise Edition	2017 Enterprise Edition

URI

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

Table 6-15 Parameters

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .

Request

Parameter description

Table 6-16 Parameters

Parameter	Mandatory	Type	Description
source	Yes	Object	Specifies the restoration information. For details, see Table 6-17 .
target	Yes	Object	Specifies the restoration target. For details, see Table 6-18 .

Table 6-17 source field data structure description

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Specifies the DB instance ID.
type	No	String	Specifies the restoration mode. Enumerated values include: • 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.
backup_id	No	String	Specifies the ID of the backup used to restore data. This parameter must be specified when the backup file is used for restoration.
restore_time	No	Integer	Specifies the time point of data restoration in the UNIX timestamp. The unit is millisecond and the time zone is UTC.

Parameter	Mandatory	Type	Description
database_name	No	Map<String, String>	This parameter applies only to the Microsoft SQL Server DB engine. • If this parameter is specified, you can restore all or specific databases and rename new databases. • If this parameter is not specified, all databases are restored by default. • You can enter multiple new database names and separate them with commas (,). The new database names can contain but cannot be the same as the original database names. • Note the following when you are specifying new database names: – New database names must be different from the original database names. If they are left blank, the original database names will be used for restoration by default. – Check whether new database names are case sensitive based on the character set selected during instance creation and make sure each new database name is unique. – The total number of new and existing databases on the existing or original DB instances where data is restored cannot exceed the database quota specified by rds_databases_quota. – New database names cannot contain the following fields (case-insensitive): rdsadmin, master, msdb, tempdb, model, and resource. – New database names must consist of 1 to 64 characters, including only letters, digits, underscores (_), and hyphens (-). If you want to restore data to multiple new databases, separate them with commas (,). – New database names must be different from any database names on the original DB instance. – New database names must be different from any database names on the existing or original DB instances where data is restored.

Parameter	Mandatory	Type	Description
			Example: "database_name":{"Original database name":"New database name"} Correct example: "database_name": {"A":"A,A1,A2","B":"B1,B2","C":""} Wrong example: "database_name": {"A":"A","B":"B1,B2","C":"B1,C1","D":"D1,d1"}, Error causes are as follows: 1. The new database name (A) is the same as the original database name (A). 2. The new database name (B1) is not unique. 3. When the database name is case insensitive, the database names D1 and d1 conflict. • Exercise caution when restoring data to an existing or original DB instance. NOTICE Before the restoration, make sure that the size of the restored data does not exceed the purchased disk capacity. Expand disk capacity, if necessary.

Table 6-18 target field data structure description

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Specifies the ID of the DB instance where the backup will be restored to.

Example Request

Use backup files for restoration:

MySQL:

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

Microsoft SQL Server:

```
{
  "source": {
    "instance_id": "61879e6085bc44d1831b0ce62d988fd9in04",
    "type": "backup",
    "backup_id": "b021670e69ba4538b7b2ed07257306aibr04",
    "database_name": {
      "db1": "dbtest1",
      "db2": ""
    }
  },
  "target": {
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin04"
  }
}
```

Use PITR for restoration:

MySQL:

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

Microsoft SQL Server:

```
{
  "source": {
    "instance_id": "61879e6085bc44d1831b0ce62d988fd9in04",
    "type": "timestamp",
    "restore_time": 1532001446987,
    "database_name": {
      "db1": "dbtest1,dbtest2",
      "db2": "db2,db02",
      "db3": ""
    }
  },
  "target": {
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin04"
  }
}
```

Response

- Normal response

Table 6-19 Parameters

Parameter	Type	Description
job_id	String	Indicates the job ID.

- 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](#).

6.1.6 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.

This API will be unavailable on September 14, 2025. You are advised to switch workloads to the new API ([Restoring Tables to a Specified Point in Time \(RDS for MySQL\)](#)) before then.

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

Constraints

- This API is supported for RDS for MySQL only.
- This operation will generate restored tables on the original DB instance. Ensure that the original DB instance has sufficient storage capacity.
- 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 6-20 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 6-21 Parameters

Parameter	Mandatory	Type	Description
restoreTime	Yes	Long	Backup time point.
restoreTables	Yes	Array of objects	Database information. For details, see Table 6-22 .
is_fast_restore	No	Boolean	Whether to use fast restoration. The value can be true or false. - To set this parameter, check whether fast restoration is supported by referring to Checking Whether Fast Restoration Can Be Used for Restoring Databases or Tables (RDS for MySQL). If fast restoration is supported, but there are XA transactions in the DB instance, set this parameter to false to prevent data loss. - If this parameter is not specified, the system determines whether to use fast restoration based on the query result of Checking Whether Fast Restoration Can Be Used for Restoring Databases or Tables (RDS for MySQL). If fast restoration is supported, but there are XA transactions in the DB instance, set this parameter to false.

Table 6-22 restoreTables field data structure description

Parameter	Mandatory	Type	Description
database	Yes	String	Specifies the database name.
tables	Yes	Array of objects	Specifies the table information. For details, see Table 6-23 .

Table 6-23 tables field data structure description

Parameter	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 6-24 Response body parameters

Parameter	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](#).

6.1.7 Deleting a Database (RDS for SQL Server)

Function

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

This API will be unavailable on March 31, 2025. You are advised to switch workloads to the new API ([Deleting a Database \(RDS for SQL Server\)](#)) before then.

- Before calling this API, learn how to [authenticate](#) it.
- 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, frozen, or abnormal.

URI

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

Table 6-25 Parameters

Parameter	Mandator y	Description
project_id	Yes	Specifies the project ID of a tenant in a region. To obtain the value, 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

Parameter description

Table 6-26 Parameters

Parameter	Mandatory	Type	Description
is_force_delete	No	Boolean	Specifies whether to forcibly delete a database. The default value is false .

Example Request

```
https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/  
a8abe84a41364097be7c233c39275087in04/database/rds-test  
  
{  
  "is_force_delete": false  
}
```

Response

- Normal response

Table 6-27 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](#).

6.1.8 Shrinking Database Logs (Not Recommended)

Function

This API is used to shrink database logs of an RDS for SQL Server instance.

This API will be unavailable on December 30, 2024. You are advised to switch workloads to the new API ([Shrinking Database Logs](#)) before then.

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

URI

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

Table 6-28 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

Table 6-29 Parameters

Parameter	Mandatory	Type	Description
db_name	Yes	String	Database name.

Example Request

Shrinking database logs

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/161e33e453954e21acff65bfa3dbfebin04/db_shrink
{
  "db_name": "test1"
}
```

Response

- Normal response

Table 6-30 Parameters

Parameter	Type	Description
resp	String	Returns successful if the invoking is successful, or returns failed if the invoking fails.

- 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](#).

6.1.9 Database Proxy (PostgreSQL)

6.1.9.1 Enabling Database Proxy

Function

This API is used to enable database proxy for a specified DB instance.

This API will be unavailable on April 30, 2024.

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

Constraints

- To use database proxy, contact customer service to apply for the required permissions.
- Only RDS for PostgreSQL 11 and 12 are supported.
- DB instances must be deployed in primary/standby mode, and at least one read replica is available.

URI

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

Table 6-31 Parameters

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Parameter description

Table 6-32 Parameters

Parameter	Mandatory	Type	Description
flavor_id	No	String	Flavor ID.
node_num	No	Integer	Number of nodes. This parameter can be only set to 2 if it is not left blank.

Example Request

```
https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcb8a8603c32cc4aein03/proxy
{
  "flavor_id": "rds.pg.proxy.c6.large.2.ha",
  "node_num": 2
}
```

Response

- Normal response

Table 6-33 Parameters

Parameter	Type	Description
workflow_id	String	Indicates the workflow ID.

- Example normal response

```
{  "workflow_id": "e7a7535b-eb9b-45ac-a83a-020dc5016d94"}
```
- 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](#).

6.1.9.2 Disabling Database Proxy

Function

This API is used to disable database proxy for a specified DB instance.

This API will be unavailable on April 30, 2024.

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

Constraints

- Only RDS for PostgreSQL 11 and 12 are supported.
- Database proxy of DB instance has been enabled.

URI

- URI format
DELETE /v3/{*project_id*}/instances/{*instance_id*}/proxy
- URI example
https://{*endpoint*}/v3/0483b6b16e954cb88930a360d2c4e663/instances/f569f1358436479dbcba8603c32cc4aein03/proxy
- Parameter description

Table 6-34 Parameters

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .

Parameter	Mandatory	Description
instance_id	Yes	Specifies the DB instance ID.

Request

None

Response

- Normal response

Table 6-35 Parameters

Parameter	Type	Description
workflow_id	String	Indicates the workflow ID.

- Example normal response

```
{
  "workflow_id": "e7a7535b-eb9b-45ac-a83a-020dc5016d94"
}
```
- 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](#).

6.1.9.3 Querying Information About Database Proxy

Function

This API is used to query information about the database proxy of a specified DB instance.

This API will be unavailable on April 30, 2024.

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

Constraints

- Only PostgreSQL 11 and PostgreSQL 12 are supported.
- A database proxy must have been enabled for the DB instance.

URI

- URI format
GET /v3/{*project_id*}/instances/{*instance_id*}/proxy
- URI example
https://{*endpoint*}/v3/0483b6b16e954cb88930a360d2c4e663/instances/f569f1358436479dbcba8603c32cc4aein03/proxy
- Parameter description

Table 6-36 Parameters

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

None

Response

- Normal response

Table 6-37 Parameters

Parameter	Type	Description
proxy	Object	Indicates the proxy instance information. For details, see Table 6-38 .
master_instance	Object	Indicates the primary instance information. For details, see Table 6-39 .
readonly_instances	Array of objects	Indicates read replica information. For details, see Table 6-40 .

Table 6-38 proxy element data structure description

Parameter	Type	Description
pool_id	String	Indicates the proxy instance ID.
status	String	Indicates whether the proxy instance is enabled. The value can be any of the following: • open • closed • frozen • opening • closing • freezing • unfreezing
address	String	Indicates the proxy read/write splitting address.
elb_vip	String	Indicates the virtual IP address in ELB mode.
eip	String	Indicates the EIP.
port	Integer	Indicates the proxy port.
pool_status	String	Indicates the proxy instance status. The value can be any of the following: • abnormal • normal • creating • deleted
delay_threshold_in_kilo bytes	Integer	Indicates the delay threshold (KB).
cpu	String	Indicates the number of CPUs of a proxy instance.
mem	String	Indicates the memory of a proxy instance.
node_num	Integer	Indicates the number of a proxy node.
nodes	Array of objects	Indicates the proxy node information. For details, see Table 6-41 .

Parameter	Type	Description
mode	String	Indicates the proxy in the primary/standby mode. The value can be Ha .

Table 6-39 master_instance element data structure description

Parameter	Type	Description
id	String	Indicates the primary DB instance ID.
status	String	Indicates the primary DB instance status.
name	String	Indicates the primary DB instance name.
weight	Integer	Indicates the read weight of a primary DB instance.
available_zones	Array of objects	Indicates the AZ information. For details, see Table 6-42 .
cpu_num	Integer	Indicates the number of CPUs of a primary DB instance.

Table 6-40 readonly_instances element data structure description

Parameter	Type	Description
id	String	Indicates the read replica ID.
status	String	Indicates the read replica status.
name	String	Indicates the read replica name.
weight	Integer	Indicates the read weight of a read replica.
available_zones	Array of objects	Indicates the AZ information. For details, see Table 6-42 .
cpu_num	Integer	Indicates the number of CPUs of a read replica.

Table 6-41 nodes element data structure description

Parameter	Type	Description
id	String	Indicates the proxy node ID.
name	String	Indicates the proxy node name.
role	String	Indicates the proxy node role. The value can be either of the following: • master • slave
az_code	String	Indicates the AZ.
status	String	Indicates the proxy node status. The value can be any of the following: • normal • abnormal • creating • deleted
frozen_flag	Integer	Indicates whether the proxy node is frozen. • 0: unfrozen. • 1: frozen • 2: deleted after being frozen.

Table 6-42 available_zones element data structure description

Parameter	Type	Description
code	String	Indicates the AZ code.
description	String	Indicates the AZ description.

- Example normal response

```
{
  "proxy":{
    "pool_id":"c6ee492784b640e694f1da0201cd82c8po03",
    "status":"open",
    "address":"192.168.0.60",
    "elb_vip":null,
    "eip":null,
    "port":3306,
    "pool_status":"normal",
    "delay_threshold_in_kilobytes":30,
    "cpu":"4",
    "mem":"8",
    "node_num":2,
    "nodes":[
```

```
{
  {
    "id": "4fb00607cffd42dc9583ca09863df93cpn03",
    "name": "PROXY-c6ee492784b640e694f1da0201cd82c8po03_1",
    "role": "slave",
    "az_code": "az1xahz",
    "status": "normal",
    "frozen_flag": 0
  },
  {
    "id": "191f3164f918463bb6aedeb6ba742920pn03",
    "name": "PROXY-c6ee492784b640e694f1da0201cd82c8po03_0",
    "role": "master",
    "az_code": "az1xahz",
    "status": "normal",
    "frozen_flag": 0
  }
],
"mode": "Ha"
},
"master_instance": {
  "id": "49fcbb94435c4d89930e91dcf5884909in03",
  "status": "normal",
  "name": "proxy-hwt-0922-3",
  "weight": 0,
  "available_zones": [
    {
      "code": "az1xahz",
      "description": "AZ 1"
    }
  ]
},
"cpu_num": 8
},
"readonly_instances": [
  {
    "id": "83251d1398594b9fbfc8f1ab8b8228b2in03",
    "status": "normal",
    "name": "replica-a392",
    "weight": 100,
    "available_zones": [
      {
        "code": "az1xahz",
        "description": "AZ 1"
      }
    ]
  },
  {
    "cpu_num": 4
  }
]
}
```

- 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](#).

6.1.9.4 Modifying Read Weight

Function

This API is used to modify the read weight of a specified DB instance.

This API will be unavailable on April 30, 2024.

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

Constraints

- Only RDS for PostgreSQL 11 and 12 are supported.
- The database proxy of DB instances has been enabled.

URI

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

Table 6-43 Parameters

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Parameter description

Table 6-44 Parameters

Parameter	Mandatory	Type	Description
master_weight	Yes	String	Specifies the weight distributed to the primary DB instance. It can be a value from 0 to 1000.
readonly_instances	Yes	Array of objects	Specifies the read replica information. For details, see Table 6-45 .

Table 6-45 readonly_instances field data structure description

Parameter	Mandatory	Type	Description
id	Yes	String	Specifies the read replica ID.
weight	Yes	Integer	Specifies the weight distributed to a read replica. It can be a value from 0 to 1000.

Example Request

```
https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/proxy/weight

{
  "master_weight":"0",
  "readonly_instances":[
    {
      "id":"83251d1398594b9fbfc8f1ab8b8228b2in03",
      "weight":100
    }
  ]
}
```

Response

- Normal response

Table 6-46 Parameters

Parameter	Type	Description
result	String	Indicates the modified result of the read weight.

- 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](#).

6.1.9.5 Changing the Delay Threshold of Read/Write Splitting

Function

This API is used to modify the delay threshold of read/write splitting in a specified DB instance.

This API will be unavailable on April 30, 2024.

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

Constraints

- Only RDS for PostgreSQL 11 and 12 are supported.
- The database proxy of DB instance has been enabled.

URI

- URI format
PUT /v3/{*project_id*}/instances/{*instance_id*}/proxy/delay-threshold
- Parameter description

Table 6-47 Parameters

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Parameter description

Table 6-48 Parameters

Parameter	Mandatory	Type	Description
delay_threshold_in_kilobytes	Yes	Integer	Specifies the delay threshold in KB. It can be a value from 0 to 10485760.

Example Request

```
https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/  
f569f1358436479dbcba8603c32cc4aein03/proxy/delay-threshold  
  
{  
  "delay_threshold_in_kilobytes":30  
}
```

Response

- Normal response

Table 6-49 Parameters

Parameter	Type	Description
result	String	Indicates the modified result of the delay threshold of read/write splitting.

- 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](#).

6.1.9.6 Changing the Instance Class of a DB Proxy Instance

Function

This API is used to change the instance class of a DB proxy instance.

This API will be unavailable on April 30, 2024.

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

Constraints

- You need to contact customer service to apply for the required permissions.
- This API is supported only for RDS for PostgreSQL 11 and 12.
- The database proxy must have been enabled for the DB instance.

URI

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

Table 6-50 Parameters

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Parameter description

Table 6-51 Parameters

Parameter	Mandatory	Type	Description
flavor_ref	Yes	String	Specifies the ID of the new flavor.
delay	Yes	Boolean	Specifies whether to delay the change. • true: indicates that the change is delayed. It will be automatically performed in the maintenance window. • false: indicates that the change is performed immediately.

Example Request

```
https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/  
f569f1358436479dbcb8603c32cc4aein03/proxy/scale  
{
```



```
"flavor_ref" : "rds.pg.proxy.c6.xlarge.2.ha",  
"delay" : false  
}
```

Response

- Normal response

Table 6-52 Parameters

Parameter	Type	Description
job_id	String	Indicates the job ID.

- Example normal response

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

- Abnormal response

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

6.1.9.7 Querying Available Instance Classes for a DB Proxy Instance (v3.1)

Function

This API is used to query available instance classes for a DB proxy instance.

This API will be unavailable on April 30, 2024.

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

Constraints

- You need to contact customer service to apply for the required permissions.
- This API is supported only for RDS for PostgreSQL 11 and 12.
- Database proxy has been enabled for the DB instance.

URI

- URI format

GET /v3/{project_id}/instances/{instance_id}/proxy/scale/flavors

GET /v3.1/{project_id}/instances/{instance_id}/proxy/scale/flavors

- URI example

https://{endpoint}/v3.1/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/proxy/scale/flavors

- Parameter description

Table 6-53 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.
offset	No	Index offset. 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	No	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

None

Response

- Normal response

Table 6-54 Parameters

Parameter	Type	Description
compute_flavor_groups	Array of objects	Compute flavor list objects. For details, see Table 6-55 .

Table 6-55 compute_flavor_groups element data structure description

Parameter	Type	Description
group_type	String	Group type • X86: x86 architecture • ARM: Arm architecture
compute_flavors	Array of objects	Compute flavor information For details, see Table 6-56 .

Table 6-56 ScaleFlavors element data structure description

Parameter	Type	Description
code	String	Specification code
cpu	String	Number of vCPUs
mem	String	Memory size in GB

- Example normal response

```
{
  "compute_flavor_groups" : {
    "group_type" : "X86",
    "compute_flavors" : {
      "code" : "rds.pg.proxy.c6.large.2.ha",
      "cpu" : 2,
      "mem" : 4
    }
  }
}
```

- Abnormal response

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

7 Permissions and Supported Actions

7.1 Introduction

You can use Identity and Access Management (IAM) for fine-grained permissions management of your RDS. If your Huawei account does not need individual IAM users, you can skip this section.

New IAM users do not have any permissions assigned by default. You need to first add them to one or more groups and attach policies or roles to these groups. The users then inherit permissions from the groups and can perform specified operations on cloud services based on the permissions they have been assigned.

You can grant users permissions using [roles](#) and [policies](#). Roles are provided by IAM to define service-based permissions that match users' job responsibilities. Policies define API-based permissions for operations on specific resources under certain conditions, allowing for more fine-grained, secure access control of cloud resources.

NOTE

If you want to allow or deny the access to an API, use policy-based authorization.

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. The permissions required for calling an API are determined by the actions supported by the API. Only users who have been granted permissions allowing the actions can call the API successfully. For example, if an IAM user wants to query RDS DB instances using an API, the user must have been granted permissions that allow the **rds:instance:list** action.

Supported Actions

RDS provides system-defined policies that can be directly used in IAM. You can also create custom policies to supplement system-defined policies for more refined access control. Operations supported by policies are specific to APIs. The following are common concepts related to policies:

- Permissions: statements in a policy that allow or deny certain operations
- APIs: REST APIs that can be called by a user who has been granted specific permissions

- **Actions:** specific operations that are allowed or denied
- **Dependencies:** actions which a specific action depends on. When allowing an action for a user, you also need to allow any existing action dependencies for that user.
- **IAM projects/Enterprise projects:** the authorization scope of a custom policy. A custom policy can be applied to IAM projects or enterprise projects or both. Policies that contain actions for both IAM and enterprise projects can be used and applied for both IAM and Enterprise Management. Policies that contain actions only for IAM projects can be used and applied to IAM only. For details about the differences between IAM and enterprise management, see [Differences Between IAM and Enterprise Management](#).

 NOTE

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

7.2 RDS Actions

Table 7-1 Common query actions

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Querying the DB engine version	GET /v3/{projectId}/datastores/{database_name}	No action required	√	√	×
Querying database specifications	GET /v3/{project_id}/flavors/{database_name}?version_name={version_name}	No action required	√	√	×
Querying the storage type	GET /v3/{project_id}/storage-type/{database_name}?version_name={version_name}	No action required	√	√	×

Table 7-2 Instance management actions

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Creating a DB instance	POST /v3/{project_id}/instances	rds:instance:create (To create an encrypted DB instance, you need to configure the KMS Administrator permission in the project.)	√	√	×
Changing a DB instance name	PUT https://{Endpoint}/v3/{project_id}/instances/{instance_id}/name	rds:instance:modify	√	√	√
Changing a DB instance description	PUT https://{Endpoint}/v3/{project_id}/instances/{instance_id}/alias	rds:instance:modify	√	√	√
Applying for a private domain name	POST https://{Endpoint}/v3/{project_id}/instances/{instance_id}/create-dns	rds:instance:createDns	√	√	×
Modifying a private domain name	PUT https://{Endpoint}/v3/{project_id}/instances/{instance_id}/modify-dns	rds:instance:modifyDns	√	√	√

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Changing DB instance specifications	POST /v3/{project_id}/instances/{instance_id}/action	rds:instance:modifySpec	√	√	×
Scaling up storage space	POST /v3/{project_id}/instances/{instance_id}/action	rds:instance:extendSpace	√	√	√
Changing a DB instance type from single to primary/standby	POST /v3/{project_id}/instances/{instance_id}/action	rds:instance:singleToHa (The KMS Administrator permission needs to be configured for the encrypted DB instance in the project.)	√	√	√
Rebooting a DB instance	POST /v3/{project_id}/instances/{instance_id}/action	rds:instance:restart	√	√	√
Deleting a DB instance	DELETE /v3/{project_id}/instances/{instance_id}	rds:instance:delete	√	√	√
Querying DB instances	GET /v3/{project_id}/instances	rds:instance:list	√	√	√
Querying DB instances for which cross-region backups are created	GET /v3/{project_id}/backups/offsite-backup-instance	rds:instance:list	√	√	√

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Binding or unbinding an EIP	PUT /v3/{project_id}/instances/{instance_id}/public-ip	rds:instance:modifyPublicAccess	√	√	×
Changing a DB instance password	PUT /v3/{project_id}/instances/{instance_id}/password	rds:password:update	√	√	√
Performing a manual switchover	PUT /v3/{project_id}/instances/{instance_id}/failover	rds:instance:switchover	√	√	√
Changing a failover priority	PUT /v3/{project_id}/instances/{instance_id}/failover/strategy	rds:instance:modifyStrategy	√	√	√
Changing a replication mode	PUT /v3/{project_id}/instances/{instance_id}/failover/mode	rds:instance:modifySynchronizeModel	√	√	√
Changing a maintenance window	PUT /v3/{project_id}/instances/{instance_id}/ops-window	rds:instance:modify	√	√	√
Migrating the standby DB instance to another AZ	POST /v3/{project_id}/instances/{instance_id}/migrateslave	rds:instance:create	√	√	×

Table 7-3 Database security actions

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Configuring SSL	PUT /v3/{project_id}/instances/{instance_id}/ssl	rds:instance:modifySSL	√	√	√
Changing a database port	PUT /v3/{project_id}/instances/{instance_id}/port	rds:instance:modifyPort	√	√	√
Changing a floating IP address	PUT /v3/{project_id}/instances/{instance_id}/ip	rds:instance:modifyIp	√	√	√
Changing a security group	PUT /v3/{project_id}/instances/{instance_id}/security-group	rds:instance:modifySecurityGroup	√	√	√

Table 7-4 Parameter configuration actions

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Obtaining parameter templates	GET /v3/{project_id}/configurations	rds:param:list	√	√	√
Creating a parameter template	POST /v3/{project_id}/configurations	rds:param:create	√	√	×
Modifying parameters in a parameter template	PUT /v3/{project_id}/configurations/{config_id}	rds:param:modify	√	√	√

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Applying a parameter template	PUT /v3/{project_id}/configurations/{config_id}/apply	rds:param:apply	√	√	×
Modifying parameters of a specified DB instance	PUT /v3/{project_id}/instances/{instance_id}/configurations	rds:param:modify	√	√	√
Obtaining the parameter template of a specified DB instance	GET /v3/{project_id}/instances/{instance_id}/configurations	rds:param:list	√	√	√
Obtaining parameters of a specified parameter template	GET /v3/{project_id}/configurations/{config_id}	rds:param:list	√	√	√
Deleting a parameter template	DELETE /v3/{project_id}/configurations/{config_id}	rds:param:delete	√	√	×

Table 7-5 Backup and restoration actions

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Configuring an automated backup policy	PUT /v3/{project_id}/instances/{instance_id}/backups/policy	rds:instance:modifyBackupPolicy	√	√	√

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Configuring a cross-region backup policy	PUT /v3/{project_id}/instances/{instance_id}/backups/offsite-policy	rds:instance:modifyBackupPolicy	√	√	√
Querying an automated backup policy	GET /v3/{project_id}/instances/{instance_id}/backups/policy	rds:instance:list	√	√	√
Querying a cross-region backup policy	GET /v3/{project_id}/instances/{instance_id}/backups/offsite-policy	rds:instance:list	√	√	√
Creating a manual backup	POST /v3/{project_id}/backups	rds:backup:create	√	√	×
Obtaining backups	GET /v3/{project_id}/backups?instance_id={instance_id}	rds:backup:list	√	√	×
Querying cross-region backups	GET /v3/{project_id}/offsite-backups?instance_id={instance_id}	rds:backup:list	√	√	×
Obtaining the link for downloading a backup	GET /v3/{project_id}/backup-files?backup_id={backup_id}	rds:backup:download	√	√	×
Deleting a manual backup	DELETE /v3/{project_id}/backups/{backup_id}	rds:backup:delete	√	√	×

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Querying the restoration time range	GET /v3/{project_id}/instances/{instance_id}/restore-time	rds:instance:list	√	√	×
Querying the restoration time range of a cross-region backup	GET /v3/{project_id}/instances/{instance_id}/offsite-restore-time	rds:instance:list	√	√	×
Restoring data to a new DB instance	POST /v3/{project_id}/instances	rds:instance:create (The KMS Administrator permission needs to be configured for the encrypted DB instance in the project.)	√	√	×
Restoring data to an existing or original DB instance	POST /v3/{project_id}/instances/recovery	rds:instance:restoreInPlace	√	√	×

Table 7-6 Log query actions

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Querying error logs	GET /v3/{project_id}/instances/{instance_id}/errorlog?start_date={start_date}&end_date={end_date}	rds:log:list	√	√	√
Querying slow query logs	GET /v3/{project_id}/instances/{instance_id}/slowlog?start_date={start_date}&end_date={end_date}	rds:log:list	√	√	√
Setting a policy for audit logs	PUT /v3/{project_id}/instances/{instance_id}/auditlog-policy	rds:auditlog:operate	√	√	√
Querying the policy for audit logs	GET /v3/{project_id}/instances/{instance_id}/auditlog-policy	rds:auditlog:list	√	√	√
Obtaining audit logs	GET /v3/{project_id}/instances/{instance_id}/auditlog?start_time={start_time}&end_time={end_time}&offset={offset}&limit={limit}	rds:auditlog:list	√	√	√

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Obtaining the link for downloading an audit log	POST /v3/{project_id}/instances/{instance_id}/auditlog-links	rds:auditlog:download	√	√	√
Obtaining the link for downloading a slow query log	POST /v3/{project_id}/instances/{instance_id}/slowlog-download	rds:log:download	√	√	√
Obtaining the local retention period of binlogs	GET /v3/{project_id}/instances/{instance_id}/binlog/clear-policy	rds:binlog:get	√	√	√
Setting the local retention period of binlogs	PUT /v3/{project_id}/instances/{instance_id}/binlog/clear-policy	rds:binlog:setPolicy	√	√	√

Table 7-7 Database and account management actions (RDS for MySQL)

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Creating a database	POST /v3/{project_id}/instances/{instance_id}/database	rds:database:create	√	√	√
Querying databases	GET /v3/{project_id}/instances/{instance_id}/database/detail?page={page}&limit={limit}	rds:database:list	√	√	√

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Querying authorized databases of a specified account	GET /v3/{project_id}/instances/{instance_id}/db_user/database?user-name={user-name}&page={page}&limit={limit}	rds:database:list	√	√	√
Deleting a database	DELETE /v3/{project_id}/instances/{instance_id}/database/{db_name}	rds:database:drop	√	√	√
Creating a database account	POST /v3/{project_id}/instances/{instance_id}/db_user	rds:databaseUser:create	√	√	√
Querying database users	GET /v3/{project_id}/instances/{instance_id}/db_user/detail?page={page}&limit={limit}	rds:databaseUser:list	√	√	√
Querying authorized users of a specified database	GET /v3/{project_id}/instances/{instance_id}/database/db_user?db-name={db-name}&page={page}&limit={limit}	rds:databaseUser:list	√	√	√
Modifying remarks of a database user	PUT /v3/{project_id}/instances/{instance_id}/db-users/{user_name}/comment	rds:databaseUser:update	√	√	√

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Deleting a database account	DELETE /v3/{project_id}/instances/{instance_id}/db_user/{user_name}	rds:databaseUser:drop	√	√	√
Authorizing a database account	POST /v3/{project_id}/instances/{instance_id}/db_privilege	rds:databasePrivilege:grant	√	√	√
Changing the password for a database account	POST /v3/{project_id}/instances/{instance_id}/db_user/resetpwd	rds:password:update	√	√	√
Revoking permissions of a database account	DELETE /v3/{project_id}/instances/{instance_id}/db_privilege	rds:databasePrivilege:revoke	√	√	√

Table 7-8 Database and account management actions (RDS for PostgreSQL)

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Creating a database	POST /v3/{project_id}/instances/{instance_id}/database	rds:database:create	√	√	√
Creating a database account	POST /v3/{project_id}/instances/{instance_id}/db_user	rds:databaseUser:create	√	√	√

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Authorizing a database account	POST /v3/{project_id}/instances/{instance_id}/db_privilege	rds:databasePrivilege:grant	√	√	√
Creating a database schema	POST /v3/{project_id}/instances/{instance_id}/schema	rds:database:create	√	√	√
Querying databases	GET /v3/{project_id}/instances/{instance_id}/database/detail?page={page}&limit={limit}	rds:database:list	√	√	√
Querying database users	GET /v3/{project_id}/instances/{instance_id}/db_user/detail?page={page}&limit={limit}	rds:databaseUser:list	√	√	√
Querying database schemas	GET /v3/{project_id}/instances/{instance_id}/schema/detail?db_name={name}&page={page}&limit={limit}	rds:database:list	√	√	√
Modifying remarks of a database user	PUT /v3/{project_id}/instances/{instance_id}/db-users/{user_name}/comment	rds:databaseUser:update	√	√	√

Table 7-9 Recycle bin actions

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Modifying the recycling policy	PUT https://{Endpoint}/v3/{project_id}/instances/recycle-policy	rds:instance:setRecycleBin	√	×	×

Table 7-10 Tag management actions

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Adding or deleting tags in batches	POST /v3/{project_id}/instances/{instance_id}/tags/action	rds:instance:deleteTag	√	√	√
Querying project tags	GET /v3/{project_id}/tags	rds:tag:list	√	√	×

Table 7-11 Quota management actions

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Querying resource quotas	GET https://{Endpoint}/v3/{project_id}/quotas	rds:instance:list	√	√	√

Table 7-12 Task actions

Permission	API	Action	IAM Project	Enterprise Project	Authorization by Instance
Obtaining task information	GET /v3/{project_id}/jobs?id={id}	rds:task:list	√	√	×

8 Appendix

8.1 Abnormal Request Results

v3 APIs

Abnormal response description

Table 8-1 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."
}
```

8.2 Status Codes

Table 8-2 describes status codes.

Table 8-2 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.

8.3 Error Codes

If an error code starting with **APIGW** is returned after you call an API, rectify the fault by referring to the instructions provided in [API Gateway Error Codes](#).

The following table describes error codes.

Table 8-3 V3 error codes

Status Code	Error Code	Description
400	DBS.01010220	The DB instance is not in the read-only state.
500	DBS.01010221	Failed to remove the read-only status of the node.
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.

Status Code	Error Code	Description
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.
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.200037	The DB engine version is inconsistent.
400	DBS.200038	Primary/standby replication is abnormal. Try again later.
400	DBS.200039	This operation cannot be performed because the replication delay exceeds 5 minutes.
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.

Status Code	Error Code	Description
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.
400	DBS.200062	Invalid database username.
400	DBS.200063	Invalid cluster mode.
400	DBS.200076	The instance and node must be in the Available state.
400	DBS.200080	Primary/standby replication is in progress. Try again later.
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.
500	DBS.200208	Server failure.
400	DBS.200302	Storage space must be a multiple of 10.
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.
400	DBS.200311	The DB instance cannot be scaled up because a node is abnormal. Please contact technical support.
409	DBS.200316	This operation cannot be performed because the DB instance status is Storage full.
409	DBS.200402	Invalid operation.

Status Code	Error Code	Description
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.200507	The KMS key is invalid or has been deleted.
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.
403	DBS.200810	You are not allowed to create databases on read replicas.
403	DBS.200819	You are not allowed to delete database users on read replicas.
500	DBS.200821	Failed to modify database user permissions.
400	DBS.200823	The database does not exist.
400	DBS.200824	The database account does not exist.
400	DBS.200825	Modifying permission is not allowed on read replicas.
409	DBS.200826	The database name already exists.
409	DBS.200827	The database user already exists.
409	DBS.200828	You are not allowed to create a database built-in account.
500	DBS.200835	Failed to delete the database because the database lock wait times out.
500	DBS.200811	Failed to create the database.
403	DBS.201003	Resource not found or permission denied.
400	DBS.201006	Invalid parameters.

Status Code	Error Code	Description
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.
400	DBS.201208	The operation is not allowed by the backup status.
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.
400	DBS.212012	The parameter does not exist.

Status Code	Error Code	Description
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.213002	Failed to process the request.
500	DBS.213004	Failed to process the request.
400	DBS.216028	Insufficient internal resource quota.
400	DBS.280001	Parameter error.
409	DBS.280011	Another operation is being performed on the instance, or the instance is faulty. Try again later.
403	DBS.280015	Resource not found or permission denied.
403	DBS.280020	The account is restricted.
401	DBS.280058	You do not have operation permissions. Check account permissions on IAM.
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.280216	Invalid backup start time.
400	DBS.280235	Invalid database type.
400	DBS.280237	The datastore is empty.
400	DBS.280238	The DB engine or version is not supported.

Status Code	Error Code	Description
400	DBS.280239	Invalid specifications.
400	DBS.280241	Invalid storage type.
400	DBS.280242	Storage space is out of range.
400	DBS.280246	Invalid database root password.
400	DBS.280250	Invalid backup retention days.
400	DBS.280251	Invalid backup cycle.
400	DBS.280253	Invalid backup start time.
400	DBS.280262	Invalid synchronize model.
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.
404	DBS.280275	Source instance not found.
400	DBS.280277	Invalid object name.
400	DBS.280285	Invalid AZ.
400	DBS.280288	Invalid flavor.
400	DBS.280311	Invalid size of the storage space.
400	DBS.280325	Invalid disk information.
400	DBS.280328	Operation not allowed by the DB instance type.
400	DBS.280342	Invalid cluster mode.
400	DBS.280364	Invalid port number of the database.
400	DBS.280402	Invalid HA mode.
400	DBS.280404	Invalid DB instance ID or node ID format.
409	DBS.280406	Operation not allowed by the DB instance type or status.
400	DBS.280434	Invalid specification code.
400	DBS.280448	The storage type is sold out.
400	DBS.280449	Operation not allowed on frozen objects.
400	DBS.280450	The DB instance specifications are sold out.
400	DBS.280457	Invalid number of coordinating nodes.
400	DBS.280458	Invalid number of shards.

Status Code	Error Code	Description
400	DBS.280461	Invalid number of added shards.
400	DBS.280489	RDS DB instance associated with DDM instance. Delete the associated schema from the DDM instance first.
400	DBS.280490	RDS DB backup associated with a DDM backup. Delete the associated schema from the DDM backup first.
400	DBS.280649	Invalid DB instance name length.
400	DBS.280810	Failed to set read/write permissions for the database user. The user may not exist. Check the configuration.
400	DBS.280812	The DB instance is already in this state.
400	DBS.280813	There is a large transaction or DDL in progress.
400	DBS.280816	A DRS migration task is in progress. Try again later.
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.301051	The instance has no disaster recovery relationship.
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.

8.4 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

You can obtain the project ID by calling the API used to [query project information based on the specified criteria](#).

The API used to obtain a project ID is **GET** [https://{Endpoint}/v3/projects](#). *{Endpoint}* is the IAM endpoint and can be obtained from [Regions and Endpoints](#). For details about API authentication, see [Authentication](#).

The following is an example response. The value of **id** is the project ID.

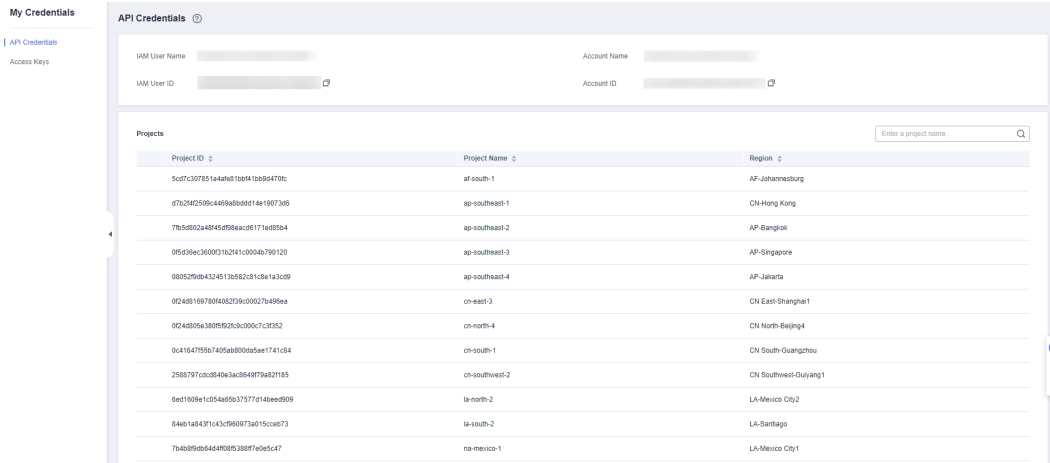
```
{
  "projects": [
    {
      "domain_id": "65382450e8f64ac0870cd180d14e684b",
      "is_domain": false,
      "parent_id": "65382450e8f64ac0870cd180d14e684b",
      "name": "project_name",
      "description": "",
      "links": {
        "next": null,
        "previous": null,
        "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
      },
      "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** Hover the mouse over the username in the upper right corner and select **My Credentials** from the drop-down list.

On the **API Credentials** page, view the project ID in the project list.

Figure 8-1 Viewing project IDs



----End

8.5 Replication Mode

Replication mode

Replication Mode	Description	Remarks
async	Asynchronous	N/A
semisync	Semi-synchronous	N/A
sync	Synchronous	N/A

8.6 Monitoring Metrics

8.6.1 RDS for MySQL Metrics

Description

This section describes namespaces, descriptions, and dimensions of metrics reported by RDS for MySQL to Cloud Eye. You can use APIs provided by Cloud Eye to retrieve metrics and alarms generated for RDS for MySQL.

Namespace

SYS.RDS

Metrics

Table 8-4 RDS for MySQL 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 instance type: RDS for MySQL instance
rds002_mem_util	Memory Usage	Memory usage of the monitored object	0–100%	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds003_iops	IOPS	Average number of I/O requests processed by the system in a specified period	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds004_bytes_in	Network Input Throughput	Incoming traffic in bytes per second	≥ 0 KiB/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds005_bytes_out	Network Output Throughput	Outgoing traffic in bytes per second	≥ 0 KiB/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds006_conn_count	Total Connections	Total number of connections that attempt to connect to the MySQL server	≥ 0 count	Monitored object: database Monitored instance type: RDS for MySQL instance
rds007_conn_active_count	Current Active Connections	Number of current active connections	≥ 0 count	Monitored object: database Monitored instance type: RDS for MySQL instance
rds008_qps	QPS	Query times of SQL statements (including stored procedures) per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds009_tps	TPS	Execution times of submitted and rollback transactions per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds010_innodb_buf_usage	Buffer Pool Usage	Ratio of used pages to total pages in the InnoDB buffer	0-100 %	Monitored object: database Monitored instance type: RDS for MySQL instance
rds011_innodb_buf_hit	Buffer Pool Hit Ratio	Ratio of read hits to read requests in the InnoDB buffer	0-100 %	Monitored object: database Monitored instance type: RDS for MySQL instance
rds012_innodb_buf_dirty	Buffer Pool Dirty Block Ratio	Ratio of dirty data to used pages in the InnoDB buffer	0-100 %	Monitored object: database Monitored instance type: RDS for MySQL instance
rds013_innodb_read	InnoDB Read Throughput	Number of read bytes per second in the InnoDB buffer	≥ 0 Byte/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds014_innodb_writes	InnoDB Write Throughput	Number of write bytes per second in the InnoDB buffer	≥ 0 Byte/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds015_innodb_read_count	InnoDB File Read Frequency	Number of times that InnoDB reads data from files per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds016_innodb_write_count	InnoDB File Write Frequency	Number of times that InnoDB writes data to files per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds017_innodb_log_write_req_count	InnoDB Log Write Requests per Second	Number of InnoDB log write requests per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds018_innodb_log_physical_write_count	InnoDB Log Physical Write Frequency	Number of InnoDB physical write times to log files per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds019_innodb_log_fsync_count	InnoDB Log fsync() Write Frequency	Number of completed fsync() write times to InnoDB log files per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds020_temp_tbl_rate	Temporary Tables Created per Second	Number of temporary tables created on hard disks per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds021_mysam_buf_usage	Key Buffer Usage	MyISAM key buffer usage	0–1	Monitored object: database Monitored instance type: RDS for MySQL instance
rds022_mysam_buf_write_hit	Key Buffer Write Hit Ratio	MyISAM key buffer write hit ratio	0–1	Monitored object: database Monitored instance type: RDS for MySQL instance
rds023_mysam_buf_read_hit	Key Buffer Read Hit Ratio	MyISAM key buffer read hit ratio	0–1	Monitored object: database Monitored instance type: RDS for MySQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds024_myisam_disk_write_count	MyISAM Disk Write Frequency	Number of times that indexes are written to disks per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds025_myisam_disk_read_count	MyISAM Disk Read Frequency	Number of times that indexes are read from disks per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds026_myisam_buffer_write_count	MyISAM Buffer Pool Write Requests per Second	Number of requests for writing indexes into the buffer pool per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds027_myisam_buffer_read_count	MyISAM Buffer Pool Read Requests per Second	Number of requests for reading indexes from the buffer pool per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds028_command_delete_count	DELETE Statements per Second	Number of DELETE statements executed per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds029_command_insert_count	INSERT Statements per Second	Number of INSERT statements executed per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds030_command_insert_select_count	INSERT_SELECT Statements per Second	Number of INSERT_SELECT statements executed per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds031_cmdml_rep_count	REPLACE Statements per Second	Number of REPLACE statements executed per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds032_cmdml_rep_sel_count	REPLACE_SELECTION Statements per Second	Number of REPLACE_SELECTION statements executed per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds033_cmdml_sel_count	SELECT Statements per Second	Number of SELECT statements executed per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds034_cmdml_upd_count	UPDATE Statements per Second	Number of UPDATE statements executed per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds035_innodb_del_row_count	Row Delete Frequency	Number of rows deleted from the InnoDB table per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds036_innodb_ins_row_count	Row Insert Frequency	Number of rows inserted into the InnoDB table per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds037_innodb_read_row_count	Row Read Frequency	Number of rows read from the InnoDB table per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds038_innodb_upd_row_count	Row Update Frequency	Number of rows updated into the InnoDB table per second	≥ 0 count/s	Monitored object: database Monitored instance type: RDS for MySQL instance
rds039_disk_util	Storage Space Usage	Storage space usage of the monitored object	0–100%	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds047_disk_total_size	Total Storage Space	Total storage space of the monitored object	40 GiB~4 000 GiB	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds048_disk_used_size	Used Storage Space	Used storage space of the monitored object	0 GiB~4 000 GiB	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds049_disk_read_throughput	Disk Read Throughput	Number of bytes read from the disk per second	≥ 0 Byte/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds050_disk_write_throughput	Disk Write Throughput	Number of bytes written into the disk per second	≥ 0 Byte/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds072_conn_usage	Connection Usage	Percent of used MySQL connections to the total number of connections	0–100%	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds173_replication_delay_avg	Average Replication Delay	Average replication delay within 60s between standby DB instances or read replicas and primary DB instances, corresponding to seconds_behind_master	≥ 0 s	Monitored object: ECS Monitored instance type: RDS for MySQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds073_replication_delay	Real-Time Replication Delay	Real-time replication delay between standby DB instances or read replicas and primary DB instances, corresponding to seconds_behind_master	≥ 0 s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds074_slow_queries	Slow Query Logs	Number of slow query logs generated per minute on RDS for MySQL. This metric counts the number of SQL statements whose execution duration exceeds the threshold specified by long_query_time .	≥ 0 count/min	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds075_avg_disk_ms_per_read	Disk Read Time	Average time required for each disk read in a specified period	≥ 0 ms	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds076_avg_disk_ms_per_write	Disk Write Time	Average time required for each disk write in a specified period	≥ 0 ms	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds077_vma	VMA	Virtual memory area size of an RDS process	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds078_threads	Threads	Number of threads in a process	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds079_vm_hwm	Peak Resident Set Size	Peak physical memory usage of an RDS process	≥ 0 KB	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds080_vm_peak	Peak Virtual Memory Size	Peak virtual memory usage of an RDS process	≥ 0 KB	Monitored object: ECS Monitored instance type: RDS for MySQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds081_vm_ioutils	The time percentage of disk I/O in a non-idle state	Percentage of time when the disk is not idle (there are I/O activities). This parameter indicates how busy the disk is. The disk can process I/O requests in parallel. If the value of this parameter reaches 100%, the disk may not reach its maximum processing capability.	0–100%	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds082_semi_sync_tx_avg_wait_time	Transaction Wait Time	Average wait time of transactions in semi-synchronous mode	$\geq 0 \mu\text{s}$	Monitored object: ECS Monitored instance type: RDS for MySQL instance
sys_swap_usage	SWAP Usage	SWAP usage of the monitored object	0–100%	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_innodb_lock_waits	Row Locks Waits Transactions	Number of InnoDB transactions waiting for row lock	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_bytes_recv_rate	Received Bytes per Second	Number of bytes received by the database per second	≥ 0 Byte/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_bytes_sent_rate	Sent Bytes per Second	Number of bytes sent from the database per second	≥ 0 Byte/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_innodb_pages_read_rate	Data Volume Read By InnoDB per Second	Data volume read by InnoDB per second	≥ 0 pages/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds_innodb_pages_written_rate	Data Volume Written by InnoDB per Second	Data volume written by InnoDB per second	≥ 0 pages/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_innodb_os_log_written_rate	Redo Log Size Written per Second	Size of redo logs written per second	≥ 0 Byte/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_innodb_buffer_pool_read_requests_rate	InnoDB buffer pool Read Requests per Second	Number of innodb_buffer_pool read requests per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_innodb_buffer_pool_write_requests_rate	InnoDB buffer pool Write Requests per Second	Number of innodb_buffer_pool write requests per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_innodb_buffer_pool_page_flushes_rate	InnoDB buffer pool Page Flushes per Second	Number of innodb_buffer_pool page flushes per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_innodb_log_waits_rate	Flush Times to Disks Due to Insufficient Log Buffer	Times of transaction logs flushed to disks due to insufficient log buffer	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds_create_d_tmp_tables_rate	Temporary Tables Created per Second	Number of temporary tables created per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_wait_thread_count	Waiting Threads	Total number of waiting threads in an instance.	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_threadpool_waiting_threads	Number of Waiting Threads in the Thread Pool	Number of waiting threads in the thread pool	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_innodb_row_lock_time_avg	Average Row Lock Wait Time	Average wait time of historical InnoDB row locks	> 0 ms	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_innodb_row_lock_current_waits	Current Row Lock Waits	Number of current InnoDB row lock waits This metric indicates the number of transactions that are currently waiting for row locks.	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_mdllock_count	MDL Locks	Number of MDL locks	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_buffer_pool_waits_free	Dirty Pages to Be Flushed to Disks	When InnoDB needs to read or create a page and no clean pages are available, InnoDB flushes some dirty pages first and waits for that operation	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for MySQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds_conn_active_usage	Active Connection Usage	Usage of active connections	0–100%	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_innodb_log_waits_count	Log Waits	Number of times that the log buffer was too small and a wait was required for it to be flushed before continuing The value is an accumulated value and is incremented by 1 each time a wait occurs.	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_long_transaction	Long Transaction	Maximum duration for starting a transaction A complete long transaction is counted only when the BEGIN and COMMIT commands exist before and after the related operation commands, respectively.	≥ 0s	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_slave_io_running	Status of the Replication I/O Thread	The status of the replication I/O thread 0: abnormal 1: normal 2: connecting	0-2	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_slave_sql_running	Status of the Replication SQL Thread	The status of the replication SQL thread 0: abnormal 1: normal	0-1	Monitored object: ECS Monitored instance type: RDS for MySQL instance
rds_temp_table_usage	Temporary Tablespace Size	Disk space occupied by the current temporary tablespace	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for MySQL instance

Dimension

Key	Value
rds_cluster_id	RDS for MySQL 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-I-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"  
  }  
}
```

8.6.2 RDS for PostgreSQL Metrics

Description

This section describes namespaces, descriptions, and dimensions of metrics reported by RDS for PostgreSQL to Cloud Eye. You can use APIs provided by Cloud Eye to retrieve metrics and alarms generated for RDS for PostgreSQL.

Namespace

SYS.RDS

Metrics

Table 8-5 RDS for PostgreSQL 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 instance type: RDS for PostgreSQL instance
rds002_mem_util	Memory Usage	Memory usage of the monitored object	0–100%	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
rds003_iops	IOPS	Average number of I/O requests processed by the system in a specified period	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
read_count_per_second	Read IOPS	Average number of read I/O requests processed by the system in a specified period	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
write_count_per_second	Write IOPS	Average number of write I/O requests processed by the system in a specified period	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
rds004_bytes_in	Network Input Throughput	Incoming traffic in bytes per second	≥ 0 KiB/s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds005_bytes_out	Network Output Throughput	Outgoing traffic in bytes per second	≥ 0 KiB/s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
rds039_disk_util	Storage Space Usage	Storage space usage of the monitored object	0–100%	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
rds040_transaction_logs_usage	Transaction Logs Usage	Storage space usage of transaction logs	≥ 0 MiB	Monitored object: database Monitored instance type: RDS for PostgreSQL instance
rds041_replication_slot_usage	Replication Slot Usage	Storage space usage of replication slot files	≥ 0 MiB	Monitored object: database Monitored instance type: RDS for PostgreSQL instance
rds042_database_connections	Database Connections in Use	Number of database connections in use	≥ 0 count	Monitored object: database Monitored instance type: RDS for PostgreSQL instance
rds043_maximum_used_transaction_ids	Maximum Used Transaction IDs	Maximum number of transaction IDs that have been used	≥ 0 count	Monitored object: database Monitored instance type: RDS for PostgreSQL instance
rds044_transaction_logs_generations	Transaction Logs Generation	Size of transaction logs generated per second	≥ 0 MiB/s	Monitored object: database Monitored instance type: RDS for PostgreSQL instance
rds045_oldest_replication_slot_lag	Oldest Replication Slot Lag	Lagging size of the most lagging replica in terms of WAL data received	≥ 0 MiB	Monitored object: database Monitored instance type: RDS for PostgreSQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds046_replication_lag	Replication Lag	Replication lag	≥ 0 ms	Monitored object: database Monitored instance type: RDS for PostgreSQL instance
rds047_disk_total_size	Total Storage Space	Total storage space of the monitored object	40 GiB~4 000 GiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
rds048_disk_used_size	Used Storage Space	Used storage space of the monitored object	0 GiB~4 000 GiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
rds049_disk_read_throughput	Disk Read Throughput	Number of bytes read from the disk per second	≥ 0 Byte/s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
rds050_disk_write_throughput	Disk Write Throughput	Number of bytes written into the disk per second	≥ 0 Byte/s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
ds082_tps	TPS	Execution times of submitted and rollback transactions per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
rds083_conn_usage	Connection Usage	Percent of used PostgreSQL connections to the total number of connections	0–100%	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
row_per_second	Operation Rows	Number of rows that are being inserted, deleted, updated, or queried	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
active_connections	Active Connections	Number of active database connections	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
idle_transaction_connections	Idle Transaction Connections	Number of idle transaction connections	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
oldest_transaction_duration	Oldest Active Transaction Duration	Length of time since the start of the transaction that has been active longer than any other current transaction	≥ 0 ms	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
oldest_transaction_duration_2pc	Oldest Two-Phase Commit Transaction Duration	Length of time since the start of the transaction that has been prepared for two-phase commit longer than any other current transaction	≥ 0 ms	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
disk_io_usage	Disk I/O Usage	I/O usage of disks. The disk I/O usage is the percentage of the time that the disk processes I/O requests to the total time. NOTE If the disk I/O usage reaches 100%, data is being written to the disk during the statistical period. The disk performance is determined by multiple metrics, such as IOPS, disk throughput, and read/write latency.	0–100%	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
lock_waiting_sessions	Sessions Waiting for Locks	Number of blocked sessions	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
swap_in_rate	Swap-In Rate	Volume of data written from the swap partition to the memory per second	≥ 0 KB/s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
swap_out_rate	Swap-Out Rate	Volume of data written from the memory to the swap partition per second	≥ 0 KB/s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
swap_total_size	Total Swap Size	Total size of the swap partition	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
swap_usage	Swap Usage	Usage of the swap partition	0–100%	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
db_max_age	Maximum Database Age	Maximum age of the current database, which is the value of max(age(datfrozenxid)) in the pg_database table	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
cpu_user_usage	User-mode CPU Time Percentage	Percentage of time that the CPU is in user mode	0–100%	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
cpu_sys_usage	Kernel-mode CPU Time Percentage	Percentage of time that the CPU is in kernel mode	0–100%	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
cpu_wait_usage	Disk I/O Wait Time Percentage	Percentage of time that the CPU is waiting for disk I/O operations to complete	0–100%	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
io_read_delay	Read I/O Latency	Average latency (in milliseconds) of disks responding to read requests	≥ 0 ms	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
io_write_delay	Write I/O Latency	Average latency (in milliseconds) of disks responding to write requests	≥ 0 ms	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
slow_sql_one_second	Number of SQL Statements Executed for More Than 1s	Number of slow SQL statements whose execution time is longer than 1s	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
slow_sql_three_second	Number of SQL Statements Executed for More Than 3s	Number of slow SQL statements whose execution time is longer than 3s	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
slow_sql_five_second	Number of SQL Statements Executed for More Than 5s	Number of slow SQL statements whose execution time is longer than 5s	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
slow_sql_log_min_duration_statement	Number of SQL Statements Executed for More Than log_min_duration_statement	Number of slow SQL statements whose execution time is longer than the value of log_min_duration_statement. You can change the value of this metric as required.	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
pg_dr_rep_l_stat	Replication Status Between Primary DB Instance and DR Instance	Replication status between the primary DB instance and DR instance. The value ranges from 0 to 5. 0: abnormal 1: startup 2: catchup 3: streaming 4: backup 5: stopping	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
pg_dr_wal_delay	LSN Latency Between Primary DB Instance and DR Instance	Latency between the LSN of the primary DB instance and the replay LSN of the DR instance	≥ 0 Byte/s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
round_trip_time	Network Latency Between Primary DB Instance and DR Instance	RTT between the primary DB instance and DR instance	≥ 0 ms	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
packet_loss_rate	Packet Loss Rate Between Primary DB Instance and DR Instance	Packet loss rate between the primary DB instance and DR instance	0–100%	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
inactive_logical_replication_slot	Inactive Logical Replication Slots	Number of inactive logical replication slots	≥ 0 count	Monitored object: database Monitored instance type: RDS for PostgreSQL instance
pgaudit_log_size	Audit Log Size	Size of audit logs	≥ 0 GiB	Monitored object: database Monitored instance type: RDS for PostgreSQL instance
slave_replication_status	Stream Replication Status of Standby Node	Stream replication status of the standby node. The value 0 indicates abnormal stream replication; 1 indicates normal stream replication; and 2 means that this node is the primary node. For this metric, the standby node also includes read replicas.	0 1 2	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
synchronous_replication_blocking_time	Synchronous Replication Blocking Time	Time during which synchronous replication between the primary and standby nodes is blocked	≥ 0 s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
temporary_files_generation_num	Temporary Files per Minute	Number of temporary files generated within 1 minute	≥ 0 count/min	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
temporary_files_generation_size	Temporary File Size per Minute	Size of temporary files generated within 1 minute	≥ 0 Byte/min	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
sent_lsn_replication_latency_size	Size of Not Sent WAL	Size of WAL logs that have not been sent from the primary node to the standby node	≥ 0 Byte	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
write_lsn_replication_latency_size	Size of Not Written WAL	Size of WAL logs that have not been written to the disk by the standby node	≥ 0 Byte	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
flush_lsn_replication_latency_size	Size of Not Flushed WAL	Size of WAL logs that have not been flushed to the disk by the standby node	≥ 0 Byte	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
replay_lsn_replication_latency_size	Size of Not Replayed WAL	Size of WAL logs that have not been replayed by the standby node	≥ 0 Byte	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
data_disk_inode_used	Inodes	Used data disk inodes	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
user_current_connections	Connections in Use	Number of connections in use (excluding built-in connections used for monitoring and O&M)	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
user_active_connections	Active Connections of Users	Number of active connections used by users (excluding built-in active connections used for monitoring and O&M)	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
wal_size	WAL Size	Size of WAL logs	≥ 0 GiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
dbuser_password_expiration_time	The fastest expiration time for database users	Database user password expiration time minus current time NOTE If no password expiration time is set, this metric cannot be collected.	≥ 0 s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
sys_memory_hit_rate	Memory Hit Rate	Memory hit rate	0-100 %	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
long_transactions_active_one_second	Transactions Alive for More Than 1s	The number of long-running transactions that are kept alive for more than 1s	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
long_transactions_active_three_second	Transactions Alive for More Than 3s	The number of long-running transactions that are kept alive for more than 3s	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
long_transactions_active_five_second	Transactions Alive for More Than 5s	The number of long-running transactions that are kept alive for more than 5s	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
long_transactions_idle_one_second	Transactions Idle for More Than 1s	The number of long-running transactions that have been idle for more than 1s	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
long_transactions_idle_three_second	Transactions Idle for More Than 3s	The number of long-running transactions that have been idle for more than 3s	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
long_transactions_idle_five_second	Transactions Idle for More Than 5s	The number of long-running transactions that have been idle for more than 5s	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
long_transactions_two_phase_running_one_second	Two-Phase Transactions Running for More Than 1s	The number of long-running transactions that have been running for more than 1s in two phases	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
long_transactions_two_phase_running_three_second	Two-Phase Transactions Running for More Than 3s	The number of long-running transactions that have been running for more than 3s in two phases	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
long_transactions_two_phase_running_five_second	Two-Phase Transactions Running for More Than 5s	The number of long-running transactions that have been running for more than 5s in two phases	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_memory_usage_process_autovacuum	Memory usage of the autovacuum process	Memory usage of the autovacuum process	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
os_cpu_process_autovacuum	CPU usage of the autovacuum process	CPU usage of the autovacuum process	0-100 %	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_cpu_process_bgwriter	CPU usage of the bgwriter process	CPU usage of the bgwriter process	0-100 %	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_cpu_process_checkpoint	CPU usage of the checkpoint process	CPU usage of the checkpoint process	0-100 %	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_cpu_process_logger	CPU usage of the logger process	CPU usage of the logger process	0-100 %	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_cpu_process_walwriter	CPU usage of the walwriter process	CPU usage of the walwriter process	0-100 %	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_cpu_process_walsender	CPU usage of the walsender process	CPU usage of the walsender process	0-100 %	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_cpu_process_postmaster	CPU usage of the postmaster process	CPU usage of the postmaster process	0-100 %	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
os_mem_usage_process_bgwriter	Memory usage of the bgwriter process	Memory usage of the bgwriter process	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_mem_usage_process_checkpoint	Memory usage of the checkpoint process	Memory usage of the checkpoint process	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_mem_usage_process_logger	Memory usage of the logger process	Memory usage of the logger process	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_mem_usage_process_walwriter	Memory usage of the walwriter process	Memory usage of the walwriter process	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_mem_usage_process_walsender	Memory usage of the walsender process	Memory usage of the walsender process	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_mem_usage_process_postmaster	Memory usage of the postmaster process	Memory usage of the postmaster process	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_mem_size_spec	Specification Memory Size	Specification memory size	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_mem_size_used	Memory Used	Memory usage	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
os_mem_size_cache	Memory usage of the page cache	Memory usage of the page cache	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_mem_size_mapped_file	Shared Memory Usage	Shared memory usage	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_mem_size_hugetlb_usage_2m	2 MB Hugepage Usage	2 MB hugepage usage (for memory greater than 32 GB)	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_fs_size_base_dir	Size of data files (excluding logs and wal files)	Size of data files (excluding logs and wal files)	≥ 0 GiB	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance
os_i throughput_total	Disk read/write throughput	Disk read/write throughput	≥ 0 MiB/s	Monitored object: ECS Monitored instance type: RDS for PostgreSQL instance

Dimension

Key	Value
postgresql_cluster_id	RDS for PostgreSQL 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-I-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"  
  }  
}
```

8.6.3 RDS for SQL Server Metrics

Description

This section describes namespaces, descriptions, and dimensions of metrics reported by RDS for SQL Server to Cloud Eye. You can use APIs provided by Cloud Eye to retrieve metrics and alarms generated for RDS for SQL Server.

Namespace

SYS.RDS

Metrics

Table 8-6 RDS for SQL Server 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 instance type: RDS for SQL Server instance
rds002_mem_util	Memory Usage	Memory usage of the monitored object	0–100%	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds003_iops	IOPS	Average number of I/O requests processed by the system in a specified period	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds004_bytes_in	Network Input Throughput	Incoming traffic in bytes per second	≥ 0 KiB/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds005_bytes_out	Network Output Throughput	Outgoing traffic in bytes per second	≥ 0 KiB/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds039_disk_util	Storage Space Usage	Storage space usage of the monitored object	0–100%	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds047_disk_total_size	Total Storage Space	Total storage space of the monitored object	40 GiB~4 000 GiB	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds048_disk_used_size	Used Storage Space	Used storage space of the monitored object	0 GiB~4 000 GiB	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds049_disk_read_throughput	Disk Read Throughput	Number of bytes read from the disk per second	≥ 0 Byte/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds050_disk_write_throughput	Disk Write Throughput	Number of bytes written into the disk per second	≥ 0 Byte/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds053_avg_disk_queue_length	Average Disk Queue Length	Number of processes to be written into the monitored object	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds054_db_connections_in_use	Database Connections in Use	Number of database connections in use	≥ 0 count	Monitored object: database Monitored instance type: RDS for SQL Server instance
rds055_transactions_per_second	Transactions per Second	Number of transactions started for the database per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds056_batches_per_second	Batches per Second	Number of Transact-SQL command batches received per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds057_logins_per_second	Logins per Second	Total number of logins started per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds058_logouts_per_second	Logouts per Second	Total number of logouts started per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds059_cache_hit_ratio	Cache Hit Ratio	Ratio of pages found in the buffer cache without having to read from the disk to total pages	0-100 %	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds060_sql_compilations_per_second	SQL Compilations per Second	Number of SQL compilations per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds061_sql_recompilations_per_sec	SQL Recompilations per Second	Number of SQL recompilations per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds062_full_scans_per_sec	Full Scans per Second	Number of unrestricted full scans per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds063_errors_per_sec	Errors per Second	Number of errors per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds064_latch_waits_per_sec	Latch Waits per Second	Number of latch requests that have not been granted immediately	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds065_lock_waits_per_sec	Lock Waits per Second	Number of lock wait requests per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds066_lock_requests_per_sec	Lock Requests per Second	Number of new locks and lock conversions per second requested from the lock manager	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds067_timeouts_per_sec	Lock Timeouts per Second	Number of lock timeouts per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds068_avg_lock_wait_time	Average Lock Wait Time	Average wait time (ms) of lock requests	≥ 0 ms	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds069_deadlocks_per_sec	Deadlocks per Second	Number of deadlocks per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
rds070_checkpoint_pages_per_sec	Checkpoint Pages per Second	Number of pages flushed to the disk per second by a checkpoint or other operations that require all dirty pages to be flushed	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
rds077_replication_delay	Replication Delay	Delay for replication between primary and standby DB instances. The replication delay of RDS for SQL Server DB instances is at the database level because data is synchronized on each database. The instance-level replication delay refers to the maximum replication delay of the databases (the delay 0s for single-node DB instances).	≥ 0 s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
mssql_memory_grant_pending	Memory Grants Pending	Total number of processes waiting for a workspace memory grant	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
mssql_lazy_write_per_sec	Lazy Writes per Second	Number of lazy writes per second	≥ 0 count/s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
mssql_page_life_expectancy	Page Life Expectancy	Number of seconds a page will stay in the buffer pool without references	≥ 0 s	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
mssql_page_reads_per_sec	Page Reads per Second	Number of page reads per second	≥ 0 count	Monitored object: ECS Monitored instance type: RDS for SQL Server instance

Metric ID	Name	Description	Value Range	Monitored Object and Instance Type
mssql_tempdb_disk_size	Temporary Tablespace Size	Disk space occupied by the current temporary tablespace	≥ 0 MiB	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
mssql_worker_threads_usage_rate	Usage of Worker Threads	Ratio of the total worker threads to the value of Max Worker Threads	0-100 %	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
sys015_mem_paged_pool	Paged Pool	The paged pool occupied by the current OS	0 MiB~9999999 MiB	Monitored object: ECS Monitored instance type: RDS for SQL Server instance
sys018_mem_modified	Modified Memory	The modified memory occupied by the current OS	0 MiB~9999999 MiB	Monitored object: ECS Monitored instance type: RDS for SQL Server instance

Dimension

Key	Value
rds_cluster_sqlserver_id	RDS for SQL Server 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-I-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"
}
}
```

8.7 Idempotent Requests

Idempotency is important in APIs because a resource may be called multiple times if an operation times out or encounters other server issues before it completes. If the original request and the subsequent retries are successful, the operation is completed multiple times. This means that you might create more resources than you intended.

To solve this problem, idempotent request identifiers are introduced to distinguish the first attempt from subsequent attempts. With an idempotent request, if the original request completes successfully, any subsequent retries complete successfully without performing any further actions.

NOTICE

Currently, idempotency is only available to the API for creating RDS for MySQL single and primary/standby instances in [Creating a DB Instance](#).

Idempotency

An idempotent operation produces the same result even when the operation is repeated many times.

Idempotency in RDS APIs

When sending a request, the client can add **X-Client-Token** to the HTTP header as the idempotency identifier. For details, see [Table 8-7](#).

Table 8-7 Idempotency identifier message header

Parameter	Description	Mandatory	Example Value
X-Client-Token	Identifier that ensures idempotency of client requests. It is a UUID containing 32 hexadecimal digits and is generated by the client. The value must be unique.	No	46436810-d999-454c-bd85-e515fd258600

Generally, the client resends the request only when the response status code is 5xx due to an internal server exception or connection timeout or when the response result cannot be obtained. If the retry request uses the same idempotent identifier and request parameters, the server will return the same result as the original request.

Description about idempotency identifiers:

- An idempotency identifier is a case-sensitive UUID containing 32 hexadecimal digits. It is in the format of xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx (8-4-4-4-12), where each x is a hexadecimal digit ranging from 0 to 9 or a to f. If you provide an identifier that is not in UUID format, the server returns error code DBS.280497.
- Idempotency identifiers must be unique. If you reuse an identifier with different parameters, the server returns error code DBS.280495.
- Idempotent identifiers remain valid for eight hours. If an identifier has expired, the server returns error code DBS.280498.
- After an idempotency identifier is used:
 - If the returned status code is 2xx, subsequent retries will return the same result as the original one without affecting the server status.
 - If the returned status code is 4xx, subsequent retries will fail. You need to rectify the fault based on the error information and retry the request.

Idempotent API

The following API is idempotent with **X-Client-Token**:

- [Creating a DB Instance](#)