

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

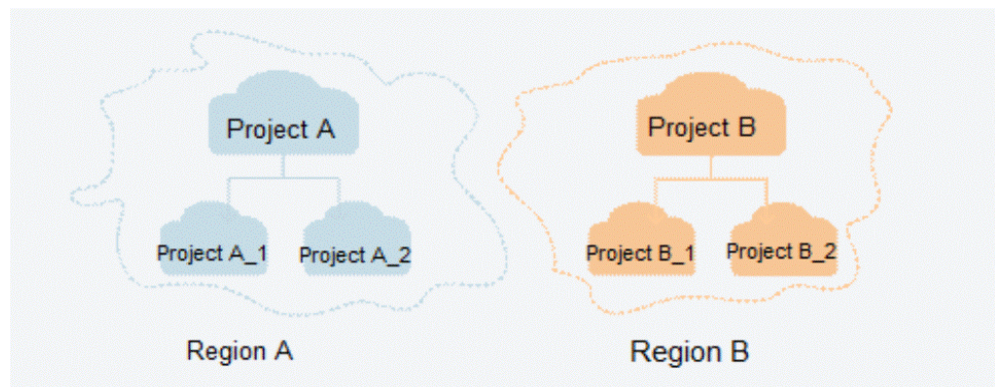
- The number of RDS DB instances that you can create is determined by your quota. To view or increase the quota, see [Managing Quotas](#).

- 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 **xxxxxxxxxxxxxxxxxxxxx** (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": "xxxxxxxxxxxxxxxxxxxxx"
      }
    }
  }
}
```

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

3.2 Authentication

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 → MIIXQYJKoZIhvcNAQcCoIIYJCCEoCAQExDTALBglghkgBZQMEAgEwgharBgkqhkiG9w0BBwGgghacBIIWmHsidG9rZW4iOnsiZXhwaXJlc19hdCI6IjwMTktMDItMTNUMC.
fj3KJs6YgKnpVNRbW2eZ5eb78SZOkjACgklQ01wi4JlGzrpd18LGXK5tdfdq4lqHCYb8P4NaY0NYejcAgzIVeFYtLWT1GSO0zxKZmlQHJQ82HBqHdglZO9fuEbl5dMhdavj+33wEI
xHRCE9I87o+k9-
j+CMZSEB7bUGd5Uj6eRASXl1jpPEGA270g1FruooL6jqglFkNPQuFSOU8+uSsttVwRtNfC+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/dsf23fsdsae3435in01/
configurations
{
  "values" : {
    "div_precision_increment": "6",
    "connect_timeout": "20",
```

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

- Change parameter values of an RDS for PostgreSQL instance.

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

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

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

Response

- Normal response

Table 4-6 Parameters

Parameter	Type	Description
job_id	String	Definition Job ID. Range N/A
restart_required	Boolean	Definition Whether a reboot is required. Range • true: A reboot is required. • false: A reboot is not required.

- Example normal response

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

- Abnormal response

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

Status Code

- Normal
200

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

Error Code

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

4.3 Restoring Data to an Existing DB Instance

Function

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

- Before calling 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 2008 R2 Enterprise 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 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

Original DB Engine Version	Restore To
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
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

URI

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

Table 4-8 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 4-9 Parameters

Parameter	Mandatory	Type	Description
source	Yes	Object	Definition Restoration information. For details, see Table 4-10 . Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
target	Yes	Object	Definition Instance to which the backup is restored. For details, see Table 4-11 . Constraints N/A Range N/A Default Value N/A

Table 4-10 source 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
type	No	String	Definition Restoration mode of the instance. Constraints N/A Range • 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. Default Value N/A
backup_id	No	String	Definition ID of the backup used to restore data. This parameter must be specified when the backup file is used for restoration. Constraints N/A Range N/A Default Value N/A

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

Parameter	Mandatory	Type	Description
database_name	No	Map<String, String>	Definition Name of the new database after the restoration. If this parameter is available, you can restore specific databases and rename new databases. Constraints • This parameter is only available to RDS for SQL Server. • If this parameter is not specified, all databases are restored by default. • Before the restoration, make sure that the size of the restored data does not exceed the purchased disk capacity. Expand disk capacity, if necessary. Range • You can enter multiple new database names and separate them with commas (,). The new database names can contain the original database names.

Parameter	Mandatory	Type	Description
			• 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,

Parameter	Mandatory	Type	Description
			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. 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"}</pre>

Parameter	Mandatory	Type	Description
			2","C":"B1,C1","D":"D1,d1"}, Error causes are as follows: • The new database name (A) is the same as the original database name (A). • The new database name (B1) is not unique. • 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. Default Value N/A

Parameter	Mandatory	Type	Description
restore_all_databases	No	Boolean	Definition Whether to restore all databases to the target instance. Constraints This field is available only for Microsoft SQL Server. Range • true: All databases will be restored to the target instance. • false: Not all databases will be restored to the target instance. Default Value The default value is false.

Table 4-11 target field data structure description

Name	Mandatory	Type	Description
instance_id	Yes	String	Definition Specifies the ID of the DB instance where the backup will be restored to. Constraints N/A Range N/A Default Value N/A

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	Definition Indicates the job ID. Range N/A

- Example normal response

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

- Abnormal response

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

Status Code

- Normal
200
- Abnormal

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

Error Code

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

4.4 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	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 4-14 Parameters

Parameter	Mandatory	Type	Description
restore_time	Yes	Long	Definition Restoration timestamp, in milliseconds. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
restore_tables	Yes	Array of objects	Definition Table information. For details, see Table 4-15. Constraints N/A
is_fast_restore	No	Boolean	Definition Whether to use fast restoration. Constraints - 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. Range true: Fast restoration is used. false: Fast restoration is not used. Default Value N/A

Table 4-15 Data structure of the restore_tables field

Parameter	Mandatory	Type	Description
database	Yes	String	Definition Database name. Constraints N/A Range N/A Default Value N/A
tables	Yes	Array of objects	Definition Table information. For details, see Table 4-16 . Constraints N/A

Table 4-16 Data structure of the tables field

Parameter	Mandatory	Type	Description
old_name	Yes	String	Definition Original table name before the restoration. Constraints N/A Range N/A Default Value N/A
new_name	Yes	String	Definition Table name after the restoration. Constraints N/A Range N/A Default Value 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	Definition Task ID. Range 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	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

Parameter	Mandatory	Description
start_date	Yes	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 N/A
end_date	Yes	Definition End time. Constraints You can only query error logs generated within a month. 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
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 0: The query starts from the first data record.

Parameter	Mandatory	Description
limit	No	Definition Number of records (query results) displayed on each page. Constraints N/A Range 1-100 Default Value 10
level	No	Definition Log level. Constraints N/A Range • ALL • INFO • LOG • WARNING • ERROR • FATAL • PANIC • NOTE Default Value 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	Definition Detailed information. For details, see Table 4-20 .
total_record	Integer	Definition Total number of records. Range N/A

Table 4-20 error_log_list field data structure description

Parameter	Type	Description
time	String	Definition Time in the UTC format. Range N/A
level	String	Definition Log level. Range N/A
content	String	Definition Error log content. Range 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	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_date	Yes	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 N/A
end_date	Yes	Definition End time. Constraints You can only query slow logs generated within a month. 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
offset	No	Definition Index offset. The query starts from the next piece of data indexed by this parameter. Constraints A maximum of 2,000 log records can be queried. Range The value must be a non-negative number. The value of offset plus the value of limit must be no more than 2000. For example, if the value of offset is set to 1900, and the value of limit cannot be greater than 100. Default Value 0: The query starts from the first data record.
limit	No	Definition Number of records (query results) displayed on each page. Constraints N/A Range 1-100 Default Value 10
type	No	Definition SQL statement type. Constraints N/A Range If it is left blank, all statement types are queried. Valid values: • INSERT • UPDATE • SELECT • DELETE • CREATE Default Value N/A

Request

- Request parameters
None

Response

- Normal response

Table 4-22 Parameters

Parameter	Type	Description
slow_log_list	Array of objects	Definition Detailed information. For details, see Table 4-23 .
total_record	Integer	Definition Total number of records. Range N/A

Table 4-23 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. Range N/A
rows_sent	String	Definition Number of sent rows. Range N/A

Parameter	Type	Description
rows_examined	String	Definition Number of scanned rows. Range N/A
database	String	Definition Database which slow logs belong to. 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

- 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	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 Name of the database to be deleted.

Request

Table 4-25 Parameters

Parameter	Mandatory	Type	Description
is_force_delete	No	Boolean	Definition Whether to forcibly delete the database. Constraints N/A Range true: The database is forcibly deleted. false: The database is not forcibly deleted. Default Value 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	Definition Job ID. Range 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	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 4-28 Parameters

Parameter	Mandatory	Type	Description
db_name	Yes	String	Definition Database name. Constraints N/A Range N/A Default Value 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	Definition Calling result. Range • successful: The API is successfully called. • failed: The API failed to be called.

- 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	Definition List of detailed API version information. For details, see Table 5-2 .

Table 5-2 versions field data structure description

Parameter	Type	Description
id	String	Definition API version. Range • v1: API v1 version • v3: API v3 version
links	Array of objects	Definition API links. The value is empty when the version is v1 or v3. For details, see Table 5-3 .
status	String	Definition Version status. Range • CURRENT: recommended version • DEPRECATED: deprecated version which may be deleted later

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

Table 5-3 links field data structure description

Parameter	Type	Description
href	String	Definition URL of the API. Range The value is "".
rel	String	Definition URL type. Range The 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](#).

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	Definition API version. Constraints N/A Range The value is case-sensitive. For details, see id in Table 5-2 in section Querying API Versions . Default Value 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	Definition API version details. For details, see Table 5-6 .
version	Object	Definition API version details. For details, see Table 5-6 .

Table 5-6 versions field data structure description

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

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

Table 5-7 links field data structure description

Parameter	Type	Description
href	String	Definition URL of the API. Range The value is "".
rel	String	Definition URL type. Range The value is self , indicating that href 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	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
database_name	Yes	Definition DB engine. Constraints N/A Range The value can be any of the following and is case-insensitive: • MySQL • PostgreSQL • SQLServer Default Value 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	Definition Database versions. For details, see Table 5-10 .

Table 5-10 dataStores field data structure description

Parameter	Type	Description
id	String	Definition Database version ID. The value is unique. Range N/A
name	String	Definition Database version number. Range - For MySQL, the minor version number can be returned. For example, if the DB engine version is MySQL 5.6.51, 5.6.51 is returned. - For PostgreSQL and Microsoft SQL Server, only the major version number (two digits) is returned. For example, if the DB engine version is PostgreSQL 9.6.X, only 9.6 is returned.

- Example normal response

```
{
  "dataStores": [{
    "id": "87620726-6802-46c0-9028-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	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
database_name	Yes	Definition DB engine name. Constraints N/A Range • MySQL • PostgreSQL • SQLServer Default Value N/A

Parameter	Mandatory	Description
version_name	No	Definition Database version. For details about how to obtain the database version, see section Querying Version Information About a DB Engine. (The minor version is supported.) Constraints N/A Range N/A Default Value N/A
is_serverless	No	Definition Whether to query serverless specifications. Constraints N/A Range • true: Serverless specifications are queried. • false: Non-serverless specifications are queried. Default Value false
spec_code	No	Definition Specification code. Constraints N/A Range N/A Default Value N/A

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	Definition Indicates the DB instance specifications information list. For details, see Table 5-13 .

Table 5-13 flavors field data structure description

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

Parameter	Type	Description
spec_code	String	Definition Indicates the resource specification code. Use rds.mysql.m1.xlarge.rr as an example. For more information, see DB Instance Classes. • rds: indicates the RDS product. • mysql: indicates the DB engine. • m1.xlarge: indicates the high memory performance specifications. • rr: indicates read replicas (.ha indicates primary/standby DB instances). • rha.rr indicates HA read replicas. Example specification code: rds.mysql.n1.large.4.rha.rr. – 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. – For details about HA read replicas, see Introducing HA Read Replicas. Range N/A
version_name	Array	Definition Indicates the database version. Example value for the MySQL DB engine: ["5.6","5.7","8.0"]
instance_mode	String	Definition Indicates the instance type. Range • ha: indicates primary/standby instances. • replica: indicates read replicas. • single: indicates single DB instances.
az_status	Map<String, String>	Definition Indicates the specification status in an AZ. Range • normal: indicates that the specifications in the AZ are available. • unsupported: indicates that the specifications are not supported by the AZ. • sellout: indicates that the specifications in the AZ are sold out.

Parameter	Type	Description
az_desc	Map<String, String>	Definition Indicates the description of the AZ to which the specifications belong. Range N/A
group_type	String	Definition Indicates instance specifications. Range • normal: general-enhanced • normal2: general-enhanced II • armFlavors: Kunpeng general-enhanced • dedicateNormal (dedicatedNormalLocalssd): exclusive x86 • armLocalssd: standard Kunpeng • normalLocalssd: standard x86 • general: general-purpose • dedicated: – For the MySQL DB engine: dedicated – For PostgreSQL and SQL Server DB engines: dedicated, which is only supported for cloud SSDs • rapid: – For the MySQL DB engine: dedicated (offline) – For PostgreSQL and SQL Server DB engines: dedicated, which is only supported for extreme SSDs • bigmem: large-memory • highPerformancePrivilegeEdition: ultra-high I/O (advanced)

- 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	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
database_name	Yes	Definition DB engine. Constraints N/A Range The value can be any of the following and is case-insensitive: • MySQL • PostgreSQL • SQLServer Default Value N/A
version_name	Yes	Definition DB engine version. Constraints N/A Range For details about how to obtain the DB engine version, see Querying Version Information About a DB Engine. For the MySQL DB engine, the parameter indicates a major version, for example, 5.6, 5.7, or 8.0. Default Value N/A

Parameter	Mandatory	Description
ha_mode	No	Definition Primary/standby mode. Constraints N/A Range - single - ha - replica Default Value 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	Definition Instance specifications. For details, see Table 5-16 .
dsspool_info	Array of objects	Definition DSS pool specifications. For details, see Table 5-17 . NOTE Only Dedicated Cloud (DeC) users are supported.

Table 5-16 storage_type field data structure description

Parameter	Type	Description
name	String	Definition Storage type. Range • 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.
az_status	Map<String, String>	Definition Specification status in an AZ. Range • normal: indicates that the specifications in the AZ are available. • unsupported: indicates that the specifications are not supported by the AZ. • sellout: indicates that the specifications in the AZ are sold out.
support_compute_group_type	List<String>	Definition Instance specifications. Range • normal: general-enhanced • normal2: general-enhanced II • armFlavors: Kunpeng general-enhanced • dedicicateNormal: exclusive x86 • armLocalssd: standard Kunpeng • normalLocalssd: standard x86 • general: general-purpose • dedicated: – For the MySQL DB engine: dedicated – For PostgreSQL and SQL Server DB engines: dedicated, which is only supported for cloud SSDs • rapid: – For the MySQL DB engine: dedicated (offline) – For PostgreSQL and SQL Server DB engines: dedicated, which is only supported for extreme SSDs • bigmem: large-memory

Table 5-17 dsspool_info field data structure description

Parameter	Type	Description
az_name	String	Definition Name of the AZ where the DSS pool is located. Range N/A
free_capacity_gb	String	Definition Available capacity of the DSS pool. Range N/A
dsspool_volume_type	String	Definition Disk type of the DSS pool. Range N/A
dsspool_id	String	Definition ID of the DSS pool. Range N/A
dsspool_status	String	Definition DSS pool status. Range • available • deploying • enlarging • frozen • sellout

- 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	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

- Request parameters
None
- URI example
GET `https://{Endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/314958daf6904c478d17c642ac209abb01/storage-used-space`

Response

- Normal response

Table 5-19 Parameters

Parameter	Type	Description
node_id	String	Definition Instance node ID. Range N/A
used	String	Definition Used storage, in GB. Range N/A

- Example normal response

```
{
  "node_id" : "0314958daf6904c478d17c642ac209abb01",
  "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	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 5-21 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	Definition Specifies the DB instance name. Instances of the same type can have the same name under the same tenant. Constraints N/A Range - 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 (_). Default Value N/A
datastore	Yes	Object	Definition Specifies the database information. For details, see Table 5-23. Constraints N/A

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

Parameter	Mandatory	Type	Description
availability_zone	Yes	String	Definition 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. The AZ ID can be obtained from the response returned after the API in Querying Database Specifications is called. Constraints N/A Range Default Value N/A
vpc_id	Yes	String	Definition Specifies the VPC ID. Constraints N/A Range - 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>. Default Value N/A

Parameter	Mandatory	Type	Description
subnet_id	Yes	String	Definition Specifies the network ID of the subnet. Constraints N/A Range - 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>. Default Value N/A

Parameter	Mandatory	Type	Description
security_group_id	Yes	String	Definition Specifies the security group which the RDS DB instance belongs to. To obtain this parameter value, use either of the following methods: Constraints N/A Range - Method 1: Log in to VPC console. Choose Access Control > Security Groups in the navigation pane on the left. On the displayed page, click the target security group. You can view the security group ID on the displayed page. - Method 2: See the "Querying Security Groups" section in the <i>Virtual Private Cloud API Reference</i>. 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 and separate them with commas (,). Default Value N/A

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

Parameter	Mandatory	Type	Description
port	No	String	Definition Specifies the database port information. Constraints N/A 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). Default Value If this parameter is not set, the default value is as follows: • RDS for MySQL: 3306

Parameter	Mandatory	Type	Description
			- RDS for PostgreSQL: 5432 - RDS for SQL Server: 1433
password	No	String	Definition Specifies the database password. Constraints N/A Range 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. - RDS for MySQL: ~!@#\$%^*_-=+?,()& - RDS for SQL Server: ~!@#\$%^*_-=+?, - RDS for PostgreSQL: ~!@#\$%^*_-=+?, 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. Default Value N/A

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

Parameter	Mandatory	Type	Description
data_vip	No	String	Definition Specifies the floating IP address of a DB instance. Currently, only IPv4 addresses are supported. Constraints N/A Range - Method 1: Log in to the VPC console and click the target subnet on the Subnets page. View the subnet CIDR block and select an IP address that is not in use. - Method 2: See the "Querying Subnets" section in the <i>Virtual Private Cloud API Reference</i>. Default Value This parameter is left blank by default.
charge_info	No	Object	Definition Specifies the billing information, which is yearly/monthly or pay-per-use (default setting). For details, see Table 5-27. Constraints N/A

Parameter	Mandatory	Type	Description
time_zone	No	String	Definition Specifies the UTC time zone. Constraints N/A Range 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. Default Value 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.
restore_point	No	Object	Definition Specifies the restoration information. This parameter is mandatory when data is restored to a new instance. For details, see Table 5-29. Constraints N/A

Parameter	Mandatory	Type	Description
tags	No	Array of objects	Definition Specifies the tag list. DB instances are created based on tag keys and values. • <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 key-value pairs, separate them with commas (.). A maximum of 20 key-value pairs can be added. For details, see Table 5-28. Constraints N/A
unchangeable_param	No	Object	Definition Specifies the list of unchangeable parameters. The unchangeable parameters need to be specified before database initialization and cannot be modified after being specified. For details, see Table 5-30. Constraints N/A

Parameter	Mandatory	Type	Description
collation	No	String	Definition Specifies the collation of an RDS for SQL Server instance. Constraints This parameter applies only to RDS for SQL Server DB instances. Range For details, see Querying the Available SQL Server Character Set. Default Value N/A
dry_run	No	Boolean	Definition Specifies whether DB instances will not be created after the request is checked. Constraints This parameter is supported with the MySQL DB engine only. Range • 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. Default Value N/A

Parameter	Mandatory	Type	Description
count	No	Integer	Definition Specifies the number of DB instances to be created in a batch. Constraints This parameter is unavailable when you create read replicas. Range 1–50 Default Value N/A
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 5-22 Parameters for creating read replicas

Parameter	Mandatory	Type	Description
name	Yes	String	Definition Specifies the DB instance name. DB instances of the same type can have same names under the same tenant. Constraints N/A Range • 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 (_). Default Value N/A
replica_of_id	Yes	String	Definition Specifies the ID of the primary DB instance. Constraints This parameter is mandatory when you create read replicas and is unavailable in other scenarios. Range N/A Default Value N/A

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

Parameter	Mandatory	Type	Description
disk_encryption_id	No	String	Definition Specifies the ID of the key used for disk encryption. Constraints N/A Range N/A Default Value This parameter is left blank by default.
region	No	String	Definition Specifies the region ID. Constraints Currently, read replicas can be created only in the same region as that of the primary DB instance. Range The value cannot be empty. To obtain this value, see Regions and Endpoints. Default Value N/A
charge_info	No	Object	Definition Specifies the billing information, which is yearly/monthly or pay-per-use (default setting). For details, see Table 5-27. Constraints 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. RDS for SQL Server does not support yearly/monthly read replicas.

Table 5-23 datastore field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	Definition Specifies the DB engine. Constraints N/A Range - MySQL - PostgreSQL - SQLServer Default Value N/A

Parameter	Mandatory	Type	Description
version	Yes	String	Definition Specifies the database version. Constraints N/A Range - For RDS for MySQL, the value can be 5.7 or 8.0. - 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. - 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

Parameter	Mandatory	Type	Description
			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 section Querying Version Information About a DB Engine. Default Value N/A
complete_version	No	String	Definition Specifies the complete version number. Constraints This parameter is returned only when the DB engine is PostgreSQL. Range N/A Default Value N/A

Table 5-24 ha field data structure description

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

Parameter	Mandatory	Type	Description
replication_mode	Yes	String	Definition Specifies the replication mode for the standby DB instance. Constraints N/A 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. Default Value N/A

Table 5-25 backup_strategy field data structure description

Parameter	Mandatory	Type	Description
start_time	Yes	String	Definition Specifies the backup time window. Automated backups will be triggered during the backup time window. Constraints N/A Range 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. - 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 Default Value N/A

Parameter	Mandatory	Type	Description
keep_days	No	Integer	Definition Specifies the retention days for specific backup files. Constraints The automated backup policy cannot be disabled for primary/standby DB instances of RDS for SQL Server. Range 0-732 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. Default Value N/A

Table 5-26 volume field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	Definition Specifies the storage type. Constraints N/A Range 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 DB instances. • ESSD: extreme SSD storage. Default Value N/A
size	Yes	Integer	Definition Specifies the volume size. Constraints For read replicas, this parameter is invalid. The volume size is the same as that of the primary DB instance by default. Range 40–4000, in GB. The value must be a multiple of 10. Default Value N/A

Table 5-27 charge_info field data structure description

Parameter	Mandatory	Type	Description
charge_mode	Yes	String	Definition Specifies the billing mode. Constraints N/A Range • prePaid: indicates the yearly/monthly billing mode. • postPaid: indicates the pay-per-use billing mode. Default Value N/A
period_type	No	String	Definition Specifies the subscription type. Constraints This parameter is valid and mandatory if charge_mode is set to prePaid. Range • month: indicates that the subscription unit is month. • year: indicates that the subscription unit is year. Default Value N/A

Parameter	Mandatory	Type	Description
period_num	No	Integer	Definition Specifies the subscription period. Constraints This parameter is valid and mandatory if charge_mode is set to prePaid. 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 or can be 5. Only RDS for MySQL supports the 5-year subscription. The constraints are as follows: - You need to contact customer service to apply for the required permissions. - This setting is supported only in CN North-Beijing4, CN East-Shanghai1, CN South-Guangzhou, and CN Southwest-Guiyang1. - This setting is supported only with general-purpose instances. Default Value N/A

Table 5-28 tags field data structure description

Parameter	Mandatory	Type	Description
key	Yes	String	Definition Specifies the 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 Specifies the 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

Table 5-29 restore_point field data structure description

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Definition Specifies the source instance ID. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
type	Yes	String	Definition Specifies the restoration mode. Constraints N/A Range • backup: indicates using backup files for restoration. In this mode, type is optional and backup_id is mandatory. • timestamp: indicates the point-in-time restoration. In this mode, type is mandatory and restore_time is mandatory. Default Value N/A
backup_id	No	String	Definition Specifies the ID of the backup to be restored. Constraints This parameter must be specified when backups are used for restoration. Range N/A Default Value N/A
restore_time	No	Integer	Definition Specifies the time point of data restoration in the UNIX timestamp. The unit is millisecond and the time zone is UTC. Constraints N/A Range N/A Default Value N/A

Parameter	Mandatory	Type	Description
database_name	No	Map<String,String>	Definition Specifies the database name. Constraints This parameter is supported only for Microsoft SQL Server databases. If this parameter is specified, you can restore specific databases and rename new databases. Range - 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>"} - New database names cannot contain the following fields (case-insensitive): rdsadmin, master, msdb, tempdb, model, and resource. - Each database name must consist of 1 to 64 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Default Value N/A

Table 5-30 unchangeable_param field data structure description

Parameter	Mandatory	Type	Description
lower_case_table_names	No	String	Definition Whether table names are case sensitive. Constraints 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. Range • 0: Table names are fixed and case sensitive. • 1: Table names are stored in lowercase and are case insensitive. Default Value 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	Definition Indicates the DB instance information. For details, see Table 5-32 .
job_id	String	Definition Indicates the ID of the DB instance creation task. For details about how to query task details, see Obtaining Information About a Task with a Specified ID . This parameter is returned only when pay-per-use DB instances are created. Range N/A

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

Table 5-32 instance field data structure description

Parameter	Type	Description
id	String	Definition 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. Range N/A
name	String	Definition Indicates the DB instance name. DB instances of the same type can have same names under the same tenant. Range N/A

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

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

Parameter	Type	Description
availability_zone	String	Definition Indicates the AZ ID. Range N/A
vpc_id	String	Definition Indicates the VPC ID. Range - 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>.
subnet_id	String	Definition Indicates the network ID of the subnet. Range - Method 1: Log in to the VPC console and click the target subnet on the Subnets page. You can view the network ID on the displayed page. - Method 2: See the "Querying Subnets" section in the <i>Virtual Private Cloud API Reference</i>.

Parameter	Type	Description
security_group_id	String	Definition Indicates the security group which the RDS DB instance belongs to. To obtain this parameter value, use either of the following methods: Range - 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>.
charge_info	Object	Definition Indicates the billing information, which is yearly/monthly or pay-per-use. For details, see Table 5-37.
collation	String	Definition Indicates the collation set for RDS for SQL Server. Range N/A

Parameter	Type	Description
restore_point	Object	Definition Indicates the restoration information. This parameter is mandatory when data is restored to a new instance. For details, see Table 5-38 .

Table 5-33 datastore field data structure description

Parameter	Type	Description
type	String	Definition Indicates the DB engine. Range - MySQL - PostgreSQL - SQLServer
version	String	Definition Indicates the database version. Range For details about supported database versions, see section Querying Version Information About a DB Engine .

Table 5-34 ha field data structure description

Parameter	Type	Description
mode	String	Definition Indicates the primary/standby instance type. Range Ha

Parameter	Type	Description
replication_mode	String	Definition Indicates the replication mode for the standby DB instance. This parameter is valid only when the instance is an HA 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 5-35 backupStrategy 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. Range 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. - 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 If backup_strategy in the request body is empty, 02:00-03:00 is returned for start_time by default.

Parameter	Type	Description
keep_days	Integer	Definition Indicates the retention days for specific backup files. Range 0-732 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. If backup_strategy in the request body is empty, 7 is returned for keep_days by default.

Table 5-36 volume field data structure description

Parameter	Type	Description
type	String	Definition Storage type. Range The value 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.
size	Integer	Definition Storage capacity. Range 40-4000, in GB. The value must be a multiple of 10.

Table 5-37 chargeInfo field data structure description

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

Table 5-38 restore_point field data structure description

Parameter	Type	Description
instance_id	String	Definition Specifies the source instance ID. Range N/A
type	String	Definition Specifies the restoration mode. Range • backup: Data is restored using backups. • timestamp: Data is restored to a point in time.
backup_id	String	Definition Specifies the ID of the backup to be restored. Range N/A

Parameter	Type	Description
restore_time	Integer	Definition Specifies the time point of data restoration in the UNIX timestamp. The unit is millisecond and the time zone is UTC. Range N/A
database_name	Map<String,String>	Definition This parameter is supported only for Microsoft SQL Server databases. If this parameter is specified, you can restore specific databases and rename new databases. Range 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. For details about how to obtain the project ID, see Obtaining a Project ID .

Request

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

Parameter	Mandatory	Type	Description
name	Yes	String	Instance name. Instances of the same type can have the same name under the same tenant. Value range: - 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 (_).
datastore	Yes	Object	Database information. This parameter is optional when you create RDS for MySQL read replicas. For details, see Table 5-42 .
ha	No	Object	HA configuration, which is used when you create primary/standby instances. For details, see Table 5-43 .
configuration_id	No	String	Parameter template ID. For details, see id in Table 5-562 of Obtaining a Parameter Template List .

Parameter	Mandatory	Type	Description
port	No	String	Database port. - RDS for MySQL instances can use database ports 1024 to 65535, excluding 12017, 33071, and 33062, 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
password	No	String	Database password. Value range: 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. - RDS for MySQL: ~!@#%\$%^*_+=+?,()&. - RDS for SQL Server: ~!@#%\$%^*_+=+?, - RDS for PostgreSQL: ~!@#%\$%^*_+=+?, 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.

Parameter	Mandatory	Type	Description
backup_strategy	No	Object	Advanced backup policy. For details, see Table 5-44 .
enterprise_project_id	No	String	Enterprise project ID.
disk_encryption_id	No	String	Key ID for disk encryption. The default value is empty. NOTE 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 Obtaining an Agency URN .
flavor_ref	Yes	String	Specification code. The value cannot be empty. For details, see spec_code in Table 5-13 of Querying Database Specifications .
volume	Yes	Object	Volume information. For details, see Table 5-45 .
region	Yes	String	Region ID. The value cannot be empty. For details about how to obtain this parameter value, see Regions and Endpoints .
availability_zone	Yes	String	AZ ID. If the DB instance is not a single-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. The AZ ID can be obtained from the response returned after the API in Querying Database Specifications is called.

Parameter	Mandatory	Type	Description
vpc_id	Yes	String	VPC ID. This parameter is optional when you create RDS for MySQL read replicas. 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>.
subnet_id	Yes	String	Subnet ID. This parameter is optional when you create RDS for MySQL read replicas. 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>.
data_vip	No	String	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: - Method 1: Log in to the VPC console and click the target subnet on the Subnets page. View the subnet CIDR block and select an IP address that is not in use. - Method 2: See the "Querying Subnets" section in the <i>Virtual Private Cloud API Reference</i>.

Parameter	Mandatory	Type	Description
security_group_id	Yes	String	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. 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>.
charge_info	No	Object	Billing information, which is yearly/ monthly or pay-per-use (default setting). For details, see Table 5-46.
time_zone	No	String	UTC time zone. - If this parameter is not specified, the time zone of each DB 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.
dsspool_id	No	String	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 (,).

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. For details, see Table 5-48 .
tags	No	Array of objects	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 10 key-value pairs can be added for a DB instance. For details, see Table 5-47.
unchangeable_parameters	No	Object	List of unchangeable parameters. The unchangeable parameters need to be specified before database initialization and cannot be modified after being specified. For details, see Table 5-50 .
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. Value range: character sets queried in Querying the Available SQL Server Character Set .

Parameter	Mandatory	Type	Description
dry_run	No	Boolean	Whether DB instances will not be created after the request is checked. This parameter is supported with the MySQL DB engine 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.
count	No	Integer	Number of DB instances to be created in a batch. Value range: 1 to 50 NOTE This parameter is available only when you create an RDS for MySQL or RDS for SQL Server primary instance. This parameter is unavailable when you create read replicas.
serverless_info	No	Object	Resource scaling scope of a serverless instance. This parameter is mandatory when you create a serverless instance. For details, see Table 5-49.

Table 5-41 Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Instance name. Instances of the same type can have the same name under the same tenant. Value range: - 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 (_).
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 Obtaining an Agency URN .
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. For details, see spec_code in Table 5-13 of Querying Database Specifications .
volume	Yes	Object	Volume information. For details, see Table 5-45 .

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. The value cannot be empty. For details about how to obtain this parameter value, see Regions and Endpoints .
availability_zone	Yes	String	AZ ID. The AZ ID can be obtained from the response returned after the API in Querying Database Specifications is called.
charge_info	No	Object	Billing information, which is yearly/monthly or pay-per-use (default setting). For details, see Table 5-46 . NOTE 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. 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: - MySQL - PostgreSQL - SQLServer

Parameter	Mandatory	Type	Description
version	Yes	String	DB engine version. - MySQL: 5.7 and 8.0 are supported. Example value: 5.7 - PostgreSQL: 9.5, 9.6, 10, 11, 12, 13, 14, and 15 are supported. Example value: 9.6 - 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 For details about supported DB engine versions, see Querying Version Information About a DB Engine.
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 Ha (case-insensitive).

Parameter	Mandatory	Type	Description
replication_mode	Yes	String	Replication mode for the standby instance. Value: - 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 asynchronous replication. semisync indicates semi-synchronous replication. sync indicates synchronous replication.

Table 5-44 Data structure description of field backup_strategy

Parameter	Mandatory	Type	Description
start_time	Yes	String	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	Retention days for backups. The value ranges 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. NOTICE The automated backup policy cannot be disabled for primary/standby DB instances of RDS for SQL Server.

Table 5-45 Data structure description of field volume

Parameter	Mandatory	Type	Description
type	Yes	String	Storage type. The value can be any of the following (case-sensitive): • ULTRAHIGH: SSD storage (ultra-high I/O). • CLOUDSSD: cloud SSD storage. This storage type is supported only with general-purpose and dedicated instances. • ESSD: extreme SSD storage.
size	Yes	Integer	Storage space. The value must be a multiple of 10 and the value range is from 40 GB to 4,000 GB. NOTE For read replicas, this parameter is invalid. The storage space is the same as that of the primary instance by default.

Table 5-46 Data structure description of field charge_info

Parameter	Mandatory	Type	Description
charge_mode	Yes	String	Billing mode. Values: • prePaid: indicates the yearly/monthly billing mode. • postPaid: indicates the pay-per-use billing mode.
period_type	No	String	Subscription type. Values: • month: indicates that the subscription unit is month. • year: indicates that the subscription unit is year. NOTE This parameter is valid and mandatory if charge_mode is set to prePaid .
period_num	No	Integer	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 or can be 5. Only RDS for MySQL supports the 5-year subscription. The constraints are as follows: – You need to contact customer service to apply for the required permissions. – This setting is supported only in CN North-Beijing4, CN East-Shanghai1, CN South-Guangzhou, and CN Southwest-Guiyang1. – This setting is supported only with general-purpose instances.

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. • true: indicates that automatic renewal is enabled. • false: indicates that automatic renewal is disabled. The default value is false.
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. • true: The order will be automatically paid. • false: The order will be manually paid. The default value is false.

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 sys.
value	Yes	String	Tag value. It can be left blank or contain a maximum of 255 Unicode characters. 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: • backup: indicates using backup files for restoration. In this mode, type is optional and backup_id is mandatory. • timestamp: indicates the point-in-time restoration. In this mode, type is mandatory and restore_time is mandatory.
<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. • 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>"} • New database names cannot contain the following fields (case-insensitive): rdsadmin, master, msdb, tempdb, model, and resource. • Each database name must consist of 1 to 64 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed.

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. NOTE RCU: RDS Capacity Unit. It is the billing unit for serverless instances. The value of <code>max_cap</code> must be greater than that of <code>min_cap</code> .
<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 1 . Values: 0: Table names are fixed and case sensitive. 1: Table names are stored in lowercase and are case insensitive. NOTE 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::xxxxx: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::xxxxx: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. For details, see Table 5-52 .
job_id	String	ID of the instance creation task. For details about how to query task details, see Obtaining Information About a Task with a Specified ID . 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, BUILD indicates that the instance is being created. This parameter is returned only for the creation of pay-per-use instances.
datastore	Object	Database information. For details, see Table 5-53 .
ha	Object	HA configurations. This parameter is returned only when primary/standby instances are created. For details, see Table 5-54 .
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. For details, see Table 5-55 .
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. For details, see spec_code in Table 5-13 of Querying Database Specifications .
volume	Object	Volume information. For details, see Table 5-56 .
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. For details, see Table 5-57 .
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. For details, see Table 5-58 .

Table 5-53 Data structure description of field datastore

Parameter	Type	Description
type	String	DB engine. Value: - MySQL - PostgreSQL - SQLServer
version	String	DB engine version. For details about supported DB engine versions, see Querying Version Information About a DB Engine .
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 Ha .

Parameter	Type	Description
replication_mode	String	Replication mode for the standby instance. This parameter is valid only when the instance is an HA instance. Value: - 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 asynchronous replication. semisync indicates semi-synchronous replication. sync indicates synchronous replication.

Table 5-55 Data structure description of field backupStrategy

Parameter	Type	Description
start_time	String	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 If backup_strategy in the request body is empty, 02:00-03:00 is returned for start_time by default.

Parameter	Type	Description
keep_days	Integer	Retention days for backups. The value ranges 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. If backup_strategy in the request body is empty, 7 is returned for keep_days by default.

Table 5-56 Data structure description of field volume

Parameter	Type	Description
type	String	Storage type. The value can be any of the following (case-sensitive): • ULTRAHIGH: SSD storage (ultra-high I/O). • CLOUDSSD: cloud SSD storage. This storage type is supported only with general-purpose and dedicated instances. • ESSD: extreme SSD storage.
size	Integer	Storage space. 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. • month: The service is subscribed by month. • year: The service is subscribed by year.

Parameter	Type	Description
period_num	Integer	Subscription period, which is calculated by month. This parameter is valid only when charge_mode is set to prePaid (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. • false: The order will be manually paid. The default value is false. • true: The order will be automatically paid.
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. • false: Automatic renewal is disabled. The default value is false. • true: Automatic renewal is enabled.

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

Parameter	Type	Description
instance_id	String	Source instance ID.
type	String	Restoration mode. • backup: indicates using backup files for restoration. • timestamp: indicates the point-in-time restoration.
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](#).

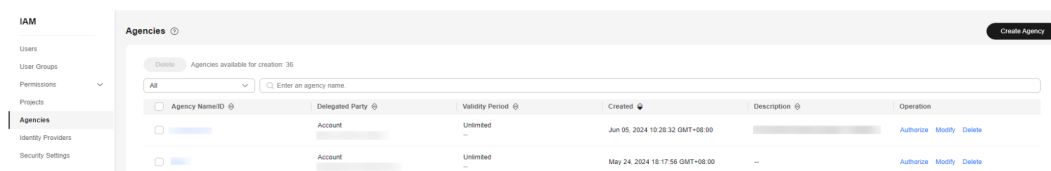
Error Code

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

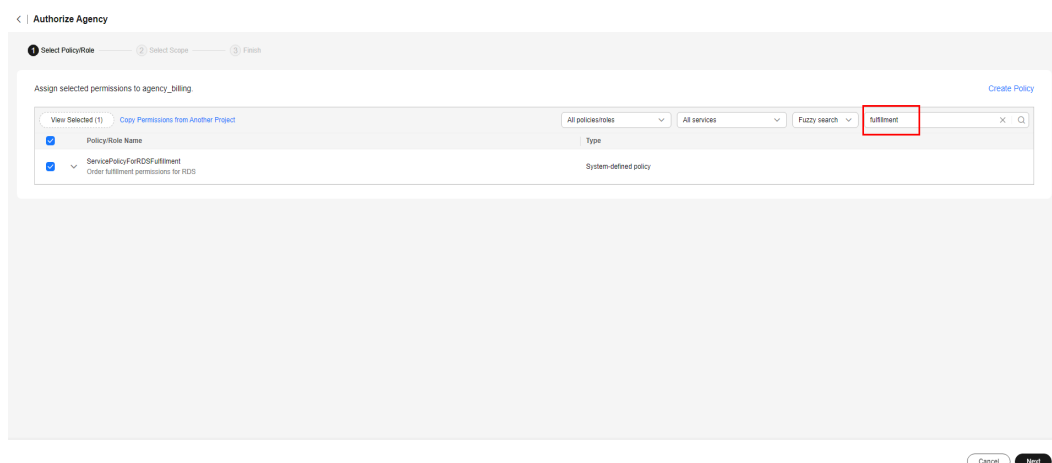
0/255

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

NOTE

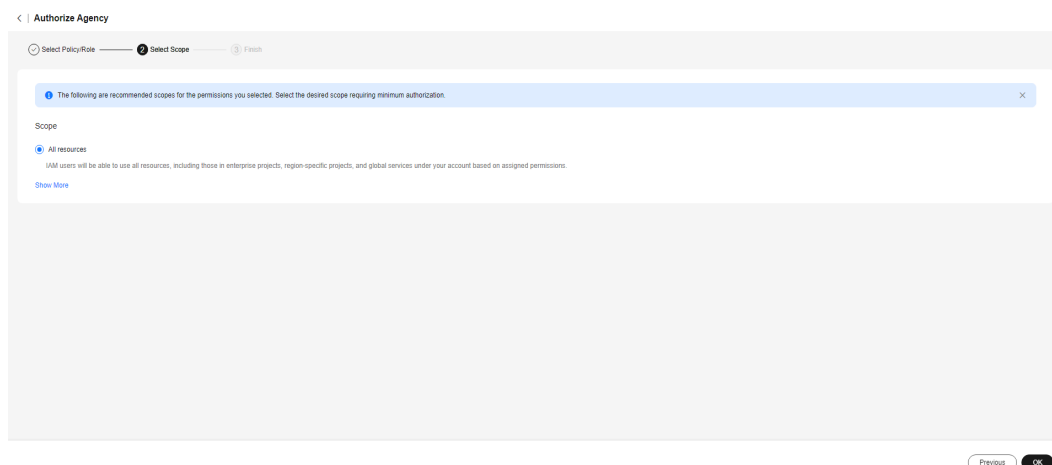
When using a RAM-based KMS shared key to create a yearly/monthly RDS instance, you must grant the Billing service the permission to operate resources in your account and the ServicePolicyForRDSFulfillment permission. After the authorization is successful, the Billing service obtains the KMS key to create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

- Parameter description

Table 5-60 Parameters

Parameter	Mandatory	Type	Description
period_type	Yes	String	Definition The unit of time. Constraints N/A Range MONTH: months YEAR: years Default Value N/A

Parameter	Mandatory	Type	Description
period_num	Yes	int	Definition The number of periods. Constraints N/A Range - When period_type is set to MONTH, this value can be an integer ranging from 1 to 9. - When period_type is set to YEAR, this value can be an integer ranging from 1 to 3. Default Value N/A
auto_pay_policy	No	String	Definition Whether to enable automatic payment. Constraints N/A Range YES: automatic payment NO (default): manual payment Default Value NO
auto_renew_policy	No	String	Definition Whether to automatically renew the subscription upon expiration. Constraints N/A Range YES: Auto renewal is enabled. NO (default): Auto renewal is disabled. Default Value 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	Definition ID of the order for changing the billing mode to yearly/monthly. Range 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. To obtain the value, see Obtaining a Project ID .
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. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

None

Example Request

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

Response

- Normal response

Table 5-65 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. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-67 Parameter description

Name	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 (_).

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. To obtain the value, see Obtaining a Project ID .
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 (-). 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 successful 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. To obtain the value, see Obtaining a Project ID .
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. Currently, only private 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	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 5-75 Parameters

Parameter	Mandatory	Type	Description
dns_name	Yes	String	Specifies the prefix of the new domain name. 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. To obtain the value, see Obtaining a Project ID .
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: private .
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. To obtain the value, see Obtaining a Project ID .
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: private
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. To obtain the value, see Obtaining a Project ID .
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: - normal - abnormal
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. To obtain the value, see Obtaining a Project ID .
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 Table 5-85 . • normal: general-enhanced • normal2: general-enhanced II • armFlavors: Kunpeng general-enhanced • dediccateNormal (dedicatedNormalLocalssd): exclusive x86 • armLocalssd: standard Kunpeng • normalLocalssd: standard x86 • general: general-purpose • dedicated: dedicated

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: normal : general-enhanced normal2 : general-enhanced II armFlavors : Kunpeng general-enhanced dedicateNormal (dedicatedNormalLocalssd) : exclusive x86 armLocalssd : standard Kunpeng normalLocalssd : standard x86 general : general-purpose dedicated : dedicated
compute_flavors	Array of objects	List of compute specifications. For details, see Table 5-86 .

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: rds.pg.m1.xlarge.rr For more specifications, see Querying Database Specifications . • rds: indicates the RDS product. • pg: indicates the DB engine. • m1.xlarge: indicates the high memory specifications. • rr: indicates read replicas (.ha indicates primary/standby DB instances).
vcpus	String	Number of vCPUs. For example, the value 1 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: • normal: The specification is available in the AZ. • unsupported: The specification is not supported. • sellout: The specification is sold out.

- 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. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Specifies the DB instance ID.

Request

Table 5-88 Parameters

Parameter	Mandatory	Type	Description
resize_flavor	Yes	Object	For details, see Table 5-89 .

Table 5-89 resize_flavor field data structure description

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

Parameter	Mandatory	Type	Description
is_auto_pay	No	Boolean	Specifies whether the order will be automatically paid when the specifications of yearly/monthly DB instances are changed. • true: indicates the order will be automatically paid. • false: indicates the order will be manually paid. The default value is false.

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. To obtain the value, see Obtaining a Project ID .
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. For details, see Table 5-94 .

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 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. • true: indicates the order will be automatically paid. • false: indicates the order will be manually paid. The default value is false.

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. To obtain the value, see Obtaining a Project ID .
instance_id	Yes	Instance ID.

Request

Table 5-98 Parameters

Parameter	Mandatory	Type	Description
switch_option	Yes	Boolean	Whether to enable autoscaling. • true: indicates that autoscaling will be enabled. • false: indicates that autoscaling will be disabled.

Parameter	Mandatory	Type	Description
limit_size	No	Integer	Upper limit for autoscaling, in GB. This parameter is mandatory when switch_option is set to true . 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 switch_option is set to true . Enumerated values: • 10 • 15 • 20
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% This parameter is available when switch_option is set to true and autoscaling increment customization is enabled. If this parameter is not specified, the default value 20% 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. 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/3d39c18788b54a919bab633874c159dfin011/disk-auto-expansion

Response

- Normal response

Table 5-100 Parameters

Parameter	Type	Description
switch_option	Boolean	Whether autoscaling is enabled. true: Enabled. false: Disabled.
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. This parameter is returned only when autoscaling increment customization is enabled. 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. To obtain the value, see Obtaining a Project ID .
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 Table 5-103 .

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. • true: indicates the order will be automatically paid. • false (default setting): indicates the order will be manually paid.
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. This parameter is available only for RDS for SQL Server. For details about the field structure, see Table 5-104.

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	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 5-108 Parameters

Parameter	Mandatory	Type	Description
restart	Yes	String	Definition Whether to restart the instance. For the MySQL and PostgreSQL DB engines, this parameter is left blank. For SQL Server, see Table 5-109 . Constraints N/A

Table 5-109 restart field description

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

Parameter	Mandatory	Type	Description
forcible	No	Boolean	Definition Whether to forcibly restart the instance. Constraints - This parameter is supported with the SQL Server DB engine only. - Forcible restart will forcibly interrupt uncommitted transactions. Range N/A Default Value N/A
delay	No	Boolean	Definition Whether to restart the instance during maintenance window. Constraints This parameter is supported with the SQL Server DB engine only. Range N/A Default Value N/A

Example Request

- Reboot an RDS for MySQL or RDS for PostgreSQL instance.
 POST https://{Endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsf23fsfdae3435in01/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 | <b>Definition</b><br>Task ID.<br><b>Range</b><br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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/dsf23fsfdae3435in01

## 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       | <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 | Type   | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------|--------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | No        | <p><b>Definition</b><br/>Instance ID.</p> <p>The asterisk (*) is reserved for the system. If the instance ID starts with *, it indicates that fuzzy match is performed based on the value following *. Otherwise, the exact match is performed based on the instance ID. The value cannot contain only asterisks (*).</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p>       |
| name      | String | No        | <p><b>Definition</b><br/>Instance name.</p> <p>The asterisk (*) is reserved for the system. If the instance name starts with *, it indicates that fuzzy match is performed based on the value following *. Otherwise, the exact match is performed based on the instance name. The value cannot contain only asterisks (*).</p> <p><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      | Type   | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|--------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type           | String | No        | <p><b>Definition</b><br/>Instance type.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>Single:</b> single-node instance</li> <li>• <b>Ha:</b> primary/standby instance</li> <li>• <b>Replica:</b> read replica</li> <li>• <b>Enterprise:</b> distributed instance (Enterprise Edition)</li> </ul> <p><b>Default Value</b><br/>N/A</p>                                                             |
| datastore_type | String | No        | <p><b>Definition</b><br/>DB engine.</p> <p><b>Constraints</b><br/>The value is case-sensitive.</p> <p><b>Range</b></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>                                                                                                                                                                                          |
| vpc_id         | String | No        | <p><b>Definition</b><br/>VPC ID. 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> <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 | Type    | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|---------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| subnet_id | String  | No        | <p><b>Definition</b></p> <p>Subnet ID. 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> <p><b>Constraints</b></p> <p>N/A</p> <p><b>Range</b></p> <p>N/A</p> <p><b>Default Value</b></p> <p>N/A</p> |
| offset    | Integer | No        | <p><b>Definition</b></p> <p>Index offset. The query starts from the next piece of data indexed by this parameter.</p> <p><b>Constraints</b></p> <p>The value must be a non-negative number.</p> <p><b>Range</b></p> <p>An integer greater than or equal to 0</p> <p><b>Default Value</b></p> <p>0</p>                                                                                                                                                                                                                                |



| Parameter | Type             | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit     | Integer          | No        | <p><b>Definition</b><br/>Number of records to be queried.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The default value is <b>100</b>. The value cannot be a negative number. The minimum value is <b>1</b> and the maximum value is <b>100</b>.</p> <p><b>Default Value</b><br/>100</p>                                                                                                                                                                                                                                                                   |
| tags      | Array of objects | No        | <p><b>Definition</b><br/>Tag key-value pairs of the instance.</p> <ul style="list-style-type: none"> <li>• {key} indicates the tag key. It must be unique and cannot be empty.</li> <li>• {value} indicates the tag value, which can be left empty.</li> </ul> <p>To query instances with multiple tag keys and values, separate key-value pairs with commas (,). A maximum of 10 key-value pairs are supported.<br/>For details, see <a href="#">Table 5-114</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> |

**Table 5-114** tags field data structure description

| Parameter | Type   | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                 |
|-----------|--------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | String | Yes       | <p><b>Definition</b><br/>Tag key.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>It 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     | String | No        | <p><b>Definition</b><br/>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>                                                          |

## 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 | <b>Definition</b><br>Indicates the DB instance information.<br>For details, see <a href="#">Table 5-116</a> . |
| total_count | Integer          | <b>Definition</b><br>Indicates the total number of records.<br><b>Range</b><br>N/A                            |

Table 5-116 instances field data structure description

| Parameter | Type   | Description                                                                         |
|-----------|--------|-------------------------------------------------------------------------------------|
| id        | String | <b>Definition</b><br>Indicates the DB instance ID.<br><b>Range</b><br>N/A           |
| name      | String | <b>Definition</b><br>Indicates the created DB instance name.<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></p> <ul style="list-style-type: none"> <li>• <b>BUILD</b>: The instance is being created.</li> <li>• <b>CREATE FAIL</b>: The instance failed to be created.</li> <li>• <b>ACTIVE</b>: The instance is running properly.</li> <li>• <b>FAILED</b>: The instance is abnormal.</li> <li>• <b>FROZEN</b>: The instance is frozen.</li> <li>• <b>MODIFYING</b>: The vCPU, memory, or storage space of the instance is being changed.</li> <li>• <b>REBOOTING</b>: The instance is being rebooted.</li> <li>• <b>RESTORING</b>: The instance is being restored.</li> <li>• <b>MODIFYING INSTANCE TYPE</b>: The instance is changing from single to primary/standby.</li> <li>• <b>SWITCHOVER</b>: The instance is performing a primary/standby switchover.</li> <li>• <b>MIGRATING</b>: The instance is being migrated.</li> <li>• <b>BACKING UP</b>: The instance is being backed up.</li> <li>• <b>MODIFYING DATABASE PORT</b>: The database port is being changed.</li> <li>• <b>STORAGE FULL</b>: The instance storage space is full.</li> </ul> |
| alias     | String | <p><b>Definition</b><br/>Indicates the DB instance alias.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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

| Parameter  | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| port       | Integer | <p><b>Definition</b><br/>Indicates the database port number.</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>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> |
| enable_ssl | Boolean | <p><b>Definition</b><br/>Indicates whether SSL is enabled for the instance.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true</b>: SSL is enabled for the instance.</li> <li>• <b>false</b>: SSL is disabled for the instance.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String | <p><b>Definition</b><br/>Instance type.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>Single</b>: single-node instance</li> <li>• <b>Ha</b>: primary/standby instance</li> <li>• <b>Replica</b>: read replica</li> <li>• <b>Enterprise</b>: distributed instance (Enterprise Edition)</li> </ul>                                                                                                                                                       |
| ha        | Object | <p><b>Definition</b><br/>Indicates the primary/standby DB instance information. Returned only when you obtain a primary/standby DB instance list.<br/>For details, see <a href="#">Table 5-117</a>.</p>                                                                                                                                                                                                                                                                      |
| region    | String | <p><b>Definition</b><br/>Indicates the region where the DB instance is deployed.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                                                             |
| datastore | Object | <p><b>Definition</b><br/>Indicates the database information.<br/>For details, see <a href="#">Table 5-118</a>.</p>                                                                                                                                                                                                                                                                                                                                                           |
| created   | String | <p><b>Definition</b><br/>Indicates the creation time.</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, if the time zone offset is one hour, the value of <b>Z</b> is <b>+0100</b>.<br/>The value is empty when the instance is being created. After the instance is created, the value is not empty.</p> |

| Parameter         | Type   | Description                                                                                                                                                                                                                                     |
|-------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| updated           | String | <b>Definition</b><br>Indicates the update time.<br><b>Range</b><br>The format is the same as that of the <b>created</b> field.<br>The value is empty when the instance is being created. After the instance is created, the value is not empty. |
| db_user_name      | String | <b>Definition</b><br>Indicates the default username.<br><b>Range</b><br>N/A                                                                                                                                                                     |
| vpc_id            | String | <b>Definition</b><br>Indicates the VPC ID.<br><b>Range</b><br>N/A                                                                                                                                                                               |
| subnet_id         | String | <b>Definition</b><br>Indicates the network ID of the subnet.<br><b>Range</b><br>N/A                                                                                                                                                             |
| security_group_id | String | <b>Definition</b><br>Indicates the security group ID.<br><b>Range</b><br>N/A                                                                                                                                                                    |
| flavor_ref        | String | <b>Definition</b><br>Indicates the specification code.<br><b>Range</b><br>N/A                                                                                                                                                                   |
| cpu               | String | <b>Definition</b><br>Indicates the number of vCPUs. For example, the value <b>1</b> indicates 1 vCPU.<br><b>Range</b><br>N/A                                                                                                                    |



| Parameter          | Type             | Description                                                                                                                                                                                                                                                                                                                                   |
|--------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| mem                | String           | <b>Definition</b><br>Indicates the memory size in GB.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                  |
| volume             | Object           | <b>Definition</b><br>Indicates instance storage.<br>For details, see <a href="#">Table 5-119</a> .                                                                                                                                                                                                                                            |
| switch_strategy    | String           | <b>Definition</b><br>Indicates the database failover priority.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>reliability</b>: Reliability is given priority during the failover.</li> <li>• <b>availability</b>: Availability is given priority during the failover.</li> </ul>                                                 |
| read_only_by_user  | Boolean          | <b>Definition</b><br>Indicates the read-only status of the DB instance. This parameter is available only to RDS for MySQL.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>true</b>: indicates that the DB instance is set to read-only.</li> <li>• <b>false</b>: indicates that the DB instance is set to read/write.</li> </ul> |
| backup_strategy    | Object           | <b>Definition</b><br>Indicates the backup policy.<br>For details, see <a href="#">Table 5-120</a> .                                                                                                                                                                                                                                           |
| maintenance_window | String           | <b>Definition</b><br>Indicates the start time of the maintenance time window in the UTC format.<br><b>Range</b><br>N/A                                                                                                                                                                                                                        |
| nodes              | Array of objects | <b>Definition</b><br>Indicates the primary/standby DB instance information.<br>For details, see <a href="#">Table 5-121</a> .                                                                                                                                                                                                                 |

| Parameter             | Type             | Description                                                                                                                                                                                                           |
|-----------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| related_instance      | Array of objects | <b>Definition</b><br>Indicates all associated DB instances.<br>For details, see <a href="#">Table 5-122</a> .                                                                                                         |
| disk_encryption_id    | String           | <b>Definition</b><br>Indicates the disk encryption key ID.<br><b>Range</b><br>N/A                                                                                                                                     |
| enterprise_project_id | String           | <b>Definition</b><br>Indicates the enterprise project ID.<br><b>Range</b><br>N/A                                                                                                                                      |
| time_zone             | String           | <b>Definition</b><br>Indicates the time zone.<br><b>Range</b><br>N/A                                                                                                                                                  |
| charge_info           | Object           | <b>Definition</b><br>Indicates the billing information, which is yearly/monthly or pay-per-use. By default, pay-per-use is used.<br>For details, see <a href="#">Table 5-123</a> .                                    |
| tags                  | Array of objects | <b>Definition</b><br>Indicates the tag list. If there is no tag in the list, an empty array is returned.<br>For details, see <a href="#">Table 5-125</a> .                                                            |
| backup_used_space     | Double           | <b>Definition</b><br>Indicates the backup space usage in GB.<br>This field is returned only when you query information about a specified RDS for PostgreSQL or RDS for SQL Server DB instance.<br><b>Range</b><br>N/A |

| Parameter           | Type    | Description                                                                                                                                                                                                                             |
|---------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| storage_used_space  | Double  | <p><b>Definition</b><br/>Indicates the storage space usage in GB.</p> <p>This field is returned only when you query information about a specified RDS for PostgreSQL or RDS for SQL Server DB instance.</p> <p><b>Range</b><br/>N/A</p> |
| order_id            | String  | <p><b>Definition</b><br/>Indicates the order ID. This field is returned only when the DB instance is billed on a yearly/monthly basis.</p> <p><b>Range</b><br/>N/A</p>                                                                  |
| associated_with_ddm | Boolean | <p><b>Definition</b><br/>Indicates whether a DDM instance has been associated.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                          |
| max_iops            | Long    | <p><b>Definition</b><br/>Indicates the maximum disk IOPS of the instance.</p> <p>This field is returned only for RDS for SQL Server instances.</p> <p><b>Range</b><br/>N/A</p>                                                          |
| expiration_time     | String  | <p><b>Definition</b><br/>Indicates the time when an instance expires. The format is yyyy-mm-ddThh:mm:ssZ.</p> <p>This field is returned only for yearly/monthly instances.</p> <p><b>Range</b><br/>N/A</p>                              |
| serverless_info     | Object  | <p><b>Definition</b><br/>Indicates the compute power range of a serverless instance, in RCU.</p> <p>For details, see <a href="#">Table 5-124</a>.</p>                                                                                   |

**Table 5-117** ha field data structure description

| Parameter        | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| replication_mode | String | <p><b>Definition</b><br/>Indicates the replication mode for the standby 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 5-118** datastore field data structure description

| Parameter | Type   | Description                                                                                                                                                                                                                                                |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String | <p><b>Definition</b><br/>Indicates the DB engine. Its value can be any of the following and is case-insensitive:</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>SQLServer</li> </ul>                    |
| version   | String | <p><b>Definition</b><br/>Indicates the database version. When the DB engine is SQL Server, <b>WEB</b> indicates the web edition, <b>SE</b> indicates the standard edition, and <b>EE</b> indicates the enterprise edition.</p> <p><b>Range</b><br/>N/A</p> |

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

**Table 5-119** volume field data structure description

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String  | <b>Definition</b><br>Storage type. The value is case-sensitive.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>COMMON</b>: SATA storage.</li> <li>• <b>HIGH</b>: SAS storage.</li> <li>• <b>ULTRAHIGH</b>: ultra-high I/O storage.</li> <li>• <b>ULTRAHIGHPRO</b>: ultra-high I/O (advanced) storage. This storage type is supported only with ultra-high performance (advanced) instances.</li> <li>• <b>CLOUDSSD</b>: cloud SSD storage. This storage type is supported only with general-purpose and dedicated instances.</li> <li>• <b>LOCALSSD</b>: local SSD storage.</li> <li>• <b>ESSD</b>: extreme SSD storage. This storage type is supported only with dedicated instances.</li> </ul> |
| size      | Integer | <b>Definition</b><br>Storage space in GB.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

**Table 5-120** backup\_strategy field data structure description

| Parameter  | Type    | Description                                                                                                                                                                                                                                                                                                               |
|------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_time | String  | <b>Definition</b><br>Indicates the backup time window. Automated backups will be triggered during the backup time window. The time is in the UTC format.<br><b>Range</b><br>N/A                                                                                                                                           |
| keep_days  | Integer | <b>Definition</b><br>Indicates the number of days to retain the generated backup files.<br><b>Range</b><br>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 | <b>Definition</b><br>Indicates the node ID.<br><b>Range</b><br>N/A                                                                                                                                                                   |
| name      | String | <b>Definition</b><br>Indicates the node name.<br><b>Range</b><br>N/A                                                                                                                                                                 |
| role      | String | <b>Definition</b><br>Indicates the node type.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>master</b>: primary node</li> <li>• <b>slave</b>: standby node</li> <li>• <b>readreplica</b>: read replica node</li> </ul> |
| status    | String | <b>Definition</b><br>Indicates the node status.                                                                                                                                                                                      |

| Parameter         | Type   | Description                                                   |
|-------------------|--------|---------------------------------------------------------------|
| availability_zone | String | <b>Definition</b><br>Indicates the AZ.<br><b>Range</b><br>N/A |

**Table 5-122** related\_instance field data structure description

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

**Table 5-123** chargeInfo field data structure description

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                         |
|-------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| charge_mode | Yes       | String | <b>Definition</b><br>Indicates the billing mode.<br><b>Range</b> <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> |

**Table 5-124** Data structure of the serverless\_info field

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

**Table 5-125** tags field data structure description

| Parameter | Type   | Description                                                          |
|-----------|--------|----------------------------------------------------------------------|
| key       | String | <b>Definition</b><br>Indicates the tag key.<br><b>Range</b><br>N/A   |
| value     | String | <b>Definition</b><br>Indicates the tag value.<br><b>Range</b><br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

### Request

**Table 5-127** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                 |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| public_ip | No        | String | <b>NOTICE</b><br>When <b>is_bind</b> is <b>true</b> , <b>public_ip</b> is mandatory.<br>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  | <b>NOTICE</b><br>When <b>is_bind</b> is <b>true</b> , <b>public_ip_id</b> is mandatory.<br><br>Specifies the EIP ID. The value must be in the standard UUID format. |
| is_bind      | Yes       | Boolean | <ul style="list-style-type: none"> <li><b>true</b>: Bind an EIP.</li> <li><b>false</b>: Unbind an EIP.</li> </ul>                                                   |

## 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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: <ul style="list-style-type: none"><li>• <b>reliability</b>: 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.</li><li>• <b>availability</b>: 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.</li></ul> |

## Example Request

Change the failover priority of a DB instance to availability.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfsae3435in01/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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

## Request

**Table 5-131** Parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| force     | No        | Boolean | <p>Whether to perform a forcible primary/standby switchover. By default, this parameter is left blank, indicating that the switchover is not performed forcibly.</p> <ul style="list-style-type: none"> <li><b>true:</b> A forcible switchover is performed.</li> <li><b>false:</b> No forcible switchover is performed.</li> </ul> <p><b>NOTE</b><br/>This parameter is valid only for the PostgreSQL DB engine.</p> |

## 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

## Request

**Table 5-133** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| mode      | Yes       | String | Specifies the replication mode.<br>For RDS for MySQL, the value can be any of the following: <ul style="list-style-type: none"><li>• <b>async</b>: asynchronous</li><li>• <b>semisync</b>: semi-synchronous</li></ul> For RDS for PostgreSQL, the value can be any of the following: <ul style="list-style-type: none"><li>• <b>async</b>: asynchronous</li><li>• <b>sync</b>: synchronous</li></ul> |

## Example Request

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

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdsae3435in01/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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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. <ul style="list-style-type: none"><li>• <b>true</b>: indicates that the instance will be set to read-only.</li><li>• <b>false</b>: indicates that the instance will be set to read/write.</li></ul> |

## 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br><br>Specify an AZ code other than the original one after obtaining the codes of the AZs where the instance specifications are supported from <a href="#">Querying Database Specifications</a> . |

## 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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). <ul style="list-style-type: none"><li>• 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.</li><li>• For RDS for SQL Server databases, the interval between the start time and end time must be four hours.</li></ul> |

## 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>Valid values: <ul style="list-style-type: none"><li>• <b>true</b>: The upgrade will be delayed. The instance will be upgraded during the specified maintenance window.</li><li>• <b>false</b> (default): The instance is upgraded immediately.</li></ul> |

## 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<br>ry | Type   | Description                                                                                                                                                                                                                             |
|-------------|---------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id  | Yes           | String | <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>The value cannot be empty.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| instance_id | Yes           | String | <b>Definition</b><br>Instance ID.<br><b>Constraints</b><br>The value cannot be empty.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                             |

## Request

**Table 5-145** Parameters

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                      |
|---------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| switch_option | Yes       | Boolean | <b>Definition</b><br>Whether to enable automatic minor version upgrade.<br><b>Constraints</b><br>N/A<br><b>Range</b> <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> <b>Default Value</b><br>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 | <b>Definition</b><br>Response result.<br><b>Range</b><br>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 | <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>The value cannot be empty.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

| Parameter   | Mandatory | Type   | Description                                                                                                                                 |
|-------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------|
| instance_id | Yes       | String | <b>Definition</b><br>Instance ID.<br><b>Constraints</b><br>The value cannot be empty.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Whether automatic minor version upgrade is enabled.<br><b>Range</b> <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> |

- 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Instance ID.                                                                                             |

## Request

**Table 5-150** Parameters

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                 |
|---------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| switch_option | Yes       | Boolean | Whether to enable Monitoring by Seconds. <ul style="list-style-type: none"> <li><b>true</b>: indicates that Monitoring by Seconds will be enabled.</li> <li><b>false</b>: indicates that Monitoring by Seconds will be disabled.</li> </ul> |
| interval      | No        | Integer | Monitoring interval, which can be 1s or 5s.<br>Enumerated values: <ul style="list-style-type: none"> <li>1</li> <li>5</li> </ul>                                                                                                            |

## 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.<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/3d39c18788b54a919bab633874c159dfin01/second-level-monitor`

### Response

- Normal response

**Table 5-152** Parameters

| Parameter     | Type    | Description                                                                                                                                                                                                                         |
|---------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| switch_option | Boolean | Whether Monitoring by Seconds is enabled. <ul style="list-style-type: none"><li>• <b>true</b>: indicates that Monitoring by Seconds is enabled.</li><li>• <b>false</b>: indicates that Monitoring by Seconds is disabled.</li></ul> |
| interval      | Integer | Monitoring interval, which can be 1s or 5s.<br>Enumerated values: <ul style="list-style-type: none"><li>• 1</li><li>• 5</li></ul>                                                                                                   |

- 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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/
3d39c18788b54a919bab633874c159dfin04/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.<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/
3d39c18788b54a919bab633874c159dfin04/tde-status
```

## Response

- Normal response

**Table 5-157** Parameters

| Parameter   | Type   | Description                                                                                                                           |
|-------------|--------|---------------------------------------------------------------------------------------------------------------------------------------|
| instance_id | String | Instance ID.                                                                                                                          |
| tde_status  | String | TDE status.<br>Enumerated values: <ul style="list-style-type: none"><li><b>open</b>: Enabled</li><li><b>close</b>: Disabled</li></ul> |

- 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>Minimum value: <b>0</b><br>Maximum value: <b>1440</b> |

### 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, <b>SUCCESS</b> 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |

## 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. <ul style="list-style-type: none"><li>• <b>DESC</b>: descending order</li><li>• <b>ASC</b>: ascending order</li></ul> Default value: <b>DESC</b> |

| Parameter  | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sort_field | No        | String  | Sorting field. <ul style="list-style-type: none"><li>• <b>status</b>: Data is sorted by DR configuration status.</li><li>• <b>time</b>: Data is sorted by DR configuration time.</li><li>• <b>master_region</b>: Data is sorted by region where the primary instance is located</li><li>• <b>slave_region</b>: Data is sorted by region where the DR instance is located</li></ul> Default value: <b>time</b> |
| offset     | No        | Integer | Index offset. If <b>offset</b> is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is <b>0</b> 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 <b>10</b> . The value must be a positive integer. The minimum value is <b>1</b> and the maximum value is <b>100</b> .                                                                                                                                                                                                                                   |

## 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.<br>For details, see <a href="#">Table 5-164</a> . |

**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 <b>0</b> or <b>-1</b> . The value <b>0</b> indicates that the synchronization is normal, and <b>-1</b> 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). <ul style="list-style-type: none"> <li>• <b>master</b>: process of configuring DR capability for the primary instance</li> <li>• <b>slave</b>: process of configuring DR for the DR instance</li> </ul> |

| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br><br>For details, see <a href="#">Table 5-167</a> . |

**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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>For details, see <a href="#">Table 5-171</a> . |

**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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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 <b>0</b> or <b>-1</b> . The value <b>0</b> indicates that the synchronization status is normal, and the value <b>-1</b> indicates that the synchronization status is abnormal.<br><b>NOTE</b><br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |

### 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.<br>For details, see <a href="#">Table 5-180</a> . |

**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.<br>For details, see <a href="#">Table 5-181</a> . |
| slave_instances | Array of objects | DR instance information.<br>For details, see <a href="#">Table 5-182</a> .      |

**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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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. <ul style="list-style-type: none"><li><b>true</b>: The operation object is the primary instance.</li><li><b>false</b>: The operation object is the DR instance.</li></ul> |

## 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       | <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 5-186** Parameters

| Parameter  | Mandatory | Type    | Description                                                                                                                                                                                                                                   |
|------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ssl_option | Yes       | boolean | <b>Definition</b><br>Specifies whether to enable SSL.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li><b>true:</b> Enable SSL.</li> <li><b>false:</b> Disable SSL.</li> </ul> <b>Default Value</b><br>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    | <b>Definition</b><br>Task ID.<br><b>Range</b><br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

## Request

**Table 5-188** Parameters

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

## Example Request

Change the database port of a DB instance to 8836.

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfac23fsdsae3435in01/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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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/dsfae23fsfsae3435in01/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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>For details, see <a href="#">Table 5-195</a> . |
| reserve_backups | No        | Boolean | The default value is <b>true</b> , 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.<br><br>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 | <p>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.</p> <p>The value must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format.</p> <ul style="list-style-type: none"> <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                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period    | No        | String | <p>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.</p> <p>Value range: The value is a number separated by commas (,), indicating the days of the week.</p> <p>For example, the value <b>1,2,3,4</b> indicates that the backup period is Monday, Tuesday, Wednesday, and Thursday.</p> |

## Example Request

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

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>For details, see <a href="#">Table 5-198</a> . |

**Table 5-198** policy\_para field data structure description

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| backup_type | Yes       | String | Specifies the backup type.<br>For RDS for SQL Server, this parameter can only be set to <b>all</b> .<br>Its value can be any of the following: <ul style="list-style-type: none"> <li>• <b>auto</b>: automated full backup</li> <li>• <b>incremental</b>: automated incremental backup</li> <li>• <b>all</b>: all backup types <ul style="list-style-type: none"> <li>– RDS for MySQL: Enable automated full backup and automated incremental backup.</li> <li>– RDS for PostgreSQL: Enable automated full backup and automated incremental backup.</li> <li>– RDS for SQL Server: Enable automated full backup, automated incremental backup, and manual backup.</li> </ul> </li> </ul> |

| Parameter              | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| keep_days              | Yes       | Integer | Specifies the number of days to retain the generated backup files.<br>Value range: 0-1825<br>The value <b>0</b> indicates that the cross-region backup policy is disabled.<br><b>NOTICE</b><br>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/dsf23fsfdae3435in01/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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |

| 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.<br>For details, see <a href="#">Table 5-201</a> . |

**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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>For details, see <a href="#">Table 5-204</a> . |

**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: <ul style="list-style-type: none"><li>• <b>auto</b>: automated full backup</li><li>• <b>incremental</b>: automated incremental backup</li><li>• <b>manual</b>: manual backup (returned only for RDS for SQL Server DB instances)</li></ul> |
| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |

## 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 (_).<br>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.<br>For details, see <a href="#">Table 5-207</a> .          |

| 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 <b>false</b> . |

**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.<br>For details, see <a href="#">Table 5-209</a> . |

**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.<br>For details, see <a href="#">Table 5-207</a> . |
| begin_time  | String           | Indicates the backup start time in the "yyyy-mm-ddThh:mm:ssZ" format, where "T" indicates the start time of the time field, and "Z" indicates the time zone offset.                              |

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

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

| Parameter  | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset     | No        | <p><b>Definition</b><br/>Index offset.</p> <p><b>Constraints</b><br/>If <b>offset</b> is set to <i>N</i>, the resource query starts from the <i>N</i>+1 piece of data. The value is <b>0</b> by default, indicating that the query starts from the first piece of data. The value must be a number but cannot be a negative number.</p> <p><b>Range</b><br/>An integer greater than or equal to 0</p> <p><b>Default Value</b><br/>0</p>                                           |
| limit      | No        | <p><b>Definition</b><br/>Number of records to be queried.</p> <p><b>Constraints</b><br/>The value cannot be a negative number.</p> <p><b>Range</b><br/>1-100</p> <p><b>Default Value</b><br/>100</p>                                                                                                                                                                                                                                                                              |
| begin_time | No        | <p><b>Definition</b><br/>Query start time.</p> <p><b>Constraints</b><br/>When <b>begin_time</b> is not empty, <b>end_time</b> is mandatory.</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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| end_time  | No        | <p><b>Definition</b><br/>Query end time.</p> <p><b>Constraints</b><br/>When <b>end_time</b> is not empty, <b>begin_time</b> is mandatory.</p> <p><b>Range</b><br/>The value is in the "yyyy-mm-ddThh:mm:ssZ" format and must be later than the query start time.</p> <p><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> |

## 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 | <p><b>Definition</b><br/>Indicates the backup list.<br/>For details, see <a href="#">Table 5-212</a>.</p> |
| total_count | Integer          | <p><b>Definition</b><br/>Indicates the total number of records.</p> <p><b>Range</b><br/>N/A</p>           |

**Table 5-212** backups field data structure description

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

| Parameter  | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| begin_time | String           | <p><b>Definition</b></p> <p>Indicates the backup start time.</p> <ul style="list-style-type: none"> <li>For a full backup, it indicates the full backup start time.</li> <li>For an RDS for MySQL incremental backup, it indicates the time when the last transaction of the last incremental backup task is committed.</li> </ul> <p><b>Range</b></p> <p>The format is yyyy-mm-ddThh:mm:ssZ. <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> |
| end_time   | String           | <p><b>Definition</b></p> <p>Indicates the backup end time.</p> <ul style="list-style-type: none"> <li>For a full backup, it indicates the full backup end time.</li> <li>For an RDS for MySQL incremental backup, it indicates the time when the last transaction is committed.</li> </ul> <p><b>Range</b></p> <p>The format is yyyy-mm-ddThh:mm:ssZ. <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>                                         |
| datastore  | Object           | <p><b>Definition</b></p> <p>Indicates the database version. For details, see <a href="#">Table 5-213</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| databases  | Array of objects | <p><b>Definition</b></p> <p>Indicates a list of self-built Microsoft SQL Server databases that support partial backups. For details, see <a href="#">Table 5-214</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Parameter           | Type    | Description                                                                                                                                                                                                                                                                                             |
|---------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_id         | String  | <b>Definition</b><br>Indicates the ID of the DB instance for which the backup is created.<br><b>Range</b><br>N/A                                                                                                                                                                                        |
| associated_with_ddm | Boolean | <b>Definition</b><br>Indicates whether this instance is associated with a DDM instance.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>false</b>: The instance is not associated with any DDM instance.</li> <li>• <b>true</b>: The instance is associated with a DDM instance.</li> </ul> |

**Table 5-213** datastore field data structure description

| Parameter | Type   | Description                                                                                                                                                                                          |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String | <b>Definition</b><br>Indicates the DB engine.<br><b>Range</b><br>The value is case-insensitive. <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>N/A                                                                                                                          |

**Table 5-214** databases field data structure description

| Parameter | Type   | Description                                                                                    |
|-----------|--------|------------------------------------------------------------------------------------------------|
| name      | String | <b>Definition</b><br>Indicates the name of the self-built database.<br><br><b>Range</b><br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                                                                                                                                                             |
| instance_id | Yes       | Specifies the DB instance ID.                                                                                                                                                                                                                                                                                                                                                                                                        |
| backup_type | Yes       | Specifies the backup type. Its value can be any of the following: <ul style="list-style-type: none"> <li><b>auto</b>: indicates automated full backups and manual backups. Cross-region manual backups are supported only for RDS for SQL Server.</li> <li><b>incremental</b>: indicates automated incremental backups.</li> </ul>                                                                                                   |
| backup_id   | No        | Specifies the backup ID.                                                                                                                                                                                                                                                                                                                                                                                                             |
| offset      | No        | Specifies the index position. If <b>offset</b> is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is <b>0</b> 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 <b>100</b> . The value cannot be a negative number. The minimum value is <b>1</b> and the maximum value is <b>100</b> .                                                                                                                                                                                                                                          |
| 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".<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> .<br><b>NOTE</b><br>When <b>begin_time</b> is not empty, <b>end_time</b> is mandatory. |

| Parameter | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| end_time  | No        | <p>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.</p> <p><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>NOTE</b><br/>When <b>end_time</b> is not empty, <b>begin_time</b> is mandatory.</p> |

## 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.<br>For details, see <a href="#">Table 5-217</a> . |
| 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           | <p>Indicates the backup type. Its value can be any of the following:</p> <ul style="list-style-type: none"> <li>• <b>auto</b>: indicates automated full backups and manual backups. Cross-region manual backups are supported only for RDS for SQL Server.</li> <li>• <b>incremental</b>: indicates automated incremental backups.</li> </ul> |
| size       | Long             | Indicates the backup size in KB.                                                                                                                                                                                                                                                                                                              |
| status     | String           | <p>Indicates the backup status. Its value can be any of the following:</p> <ul style="list-style-type: none"> <li>• <b>BUILDING</b>: backup in progress</li> <li>• <b>COMPLETED</b>: backup completed</li> <li>• <b>FAILED</b>: backup failed</li> <li>• <b>DELETING</b>: backup being deleted</li> </ul>                                     |
| databases  | Array of objects | <p>Indicates the self-built database. This parameter is returned only for RDS for SQL Server DB instances.</p> <p>For details, see <a href="#">Table 5-218</a>.</p>                                                                                                                                                                           |
| begin_time | String           | <p>Indicates the backup start time in the "yyyy-mm-ddThh:mm:ssZ" format.</p> <p><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>                                            |

| Parameter           | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| end_time            | String  | <p>Indicates the backup end time.</p> <ul style="list-style-type: none"> <li>For a full backup, it indicates the full backup end time.</li> <li>For an incremental backup, it indicates the time when the last transaction in the backup file was submitted.</li> </ul> <p>The format is yyyy-mm-ddThh:mm:ssZ. <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> |
| datastore           | Object  | <p>Indicates the database version.</p> <p>For details, see <a href="#">Table 5-219</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| instance_id         | String  | <p>Indicates the ID of the DB instance for which the backup is created.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| associated_with_ddm | Boolean | <p>Indicates whether to associate with DDM. This parameter is returned only for RDS for MySQL DB instances.</p>                                                                                                                                                                                                                                                                                                                                                                                                                   |

**Table 5-218** databases field data structure description

| Parameter | Type   | Description                                           |
|-----------|--------|-------------------------------------------------------|
| name      | String | <p>Indicates the name of the self-built database.</p> |

**Table 5-219** datastore field data structure description

| Parameter | Type   | Description               |
|-----------|--------|---------------------------|
| type      | String | <p>DB engine.</p>         |
| version   | String | <p>DB engine version.</p> |

- 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 <b>offset</b> is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is <b>0</b> 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 <b>100</b> . The value cannot be a negative number. The minimum value is <b>1</b> and the maximum value is <b>100</b> .                                                                               |

## 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.<br>For details, see <a href="#">Table 5-222</a> . |
| 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.<br>For details, see <a href="#">Table 5-223</a> . |
| 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       | <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                                                                                                                                                                                                                |
|-----------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| backup_id | Yes       | <b>Definition</b><br>Specifies the backup ID.<br>For details about how to obtain the backup ID, see <a href="#">Obtaining Backups</a> .<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}/v3/97b026aa9cc4417888c14c84a1ad9860/backup-files?backup\_id=c0c9f155c7b7423a9d30f0175998b63bbr01

## Response

- Normal response

**Table 5-225** Parameters

| Parameter | Type             | Description                                                                                                |
|-----------|------------------|------------------------------------------------------------------------------------------------------------|
| files     | Array of objects | <b>Definition</b><br>Indicates the list of backup files.<br>For details, see <a href="#">Table 5-226</a> . |
| bucket    | String           | <b>Definition</b><br>Indicates the name of the bucket where the file is located.<br><b>Range</b><br>N/A    |



**Table 5-226** files field data structure description

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name              | String | <b>Definition</b><br>Indicates the file name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                       |
| size              | Long   | <b>Definition</b><br>Indicates the file size in KB.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                 |
| download_link     | String | <b>Definition</b><br>Indicates the link for downloading the backup file.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                            |
| link_expired_time | String | <b>Definition</b><br>Indicates the link expiration time. The format is "yyyy-mm-ddThh:mm:ssZ". <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> .<br><b>Range</b><br>N/A                                                      |
| database_name     | String | <b>Definition</b><br>Indicates the name of the database. <ul style="list-style-type: none"> <li>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.</li> <li>For other engines, if the backup file is not a database-level backup, no value is returned.</li> </ul> <b>Range</b><br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>For details, see <a href="#">Table 5-230</a> . |

**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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |
| date        | No        | Specifies the date to be queried.<br>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/dsfae23fsfdsae3435in01/offsite-restore-time
  - Querying the restoration time range of a cross-region backup based on a  
specified date  
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/  
instances/dsfae23fsfdsae3435in01/offsite-restore-time?date=2020-12-26

## Response

- Normal response

**Table 5-232** Parameters

| Parameter    | Type                | Description                                                                                         |
|--------------|---------------------|-----------------------------------------------------------------------------------------------------|
| restore_time | Array of<br>objects | Indicates the list of restoration<br>time ranges.<br>For details, see <a href="#">Table 5-233</a> . |

**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.<br><br>For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |



Request

Table 5-235 Parameters

| Parameter | 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.</p> <p>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> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| password  | No        | String | <p>Specifies the database password. If this parameter is not specified, you can reset the password after the instance is created.</p> <p>Valid value:</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> <ul style="list-style-type: none"> <li>• RDS for MySQL allows special characters ~!@#\$\$%^*_-=+?,()&amp;</li> <li>• RDS for SQL Server allows special characters ~!@#\$\$%^*_-=+?,</li> <li>• RDS for PostgreSQL allows special characters ~!@#\$\$%^*_-=+?,</li> </ul> <p>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.</p> |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                               |
|-------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| flavor_ref        | Yes       | String | Specifies the specification code. The value cannot be empty.<br>For details, see <b>spec_code</b> in section <a href="#">Querying Database Specifications</a> .                                                                                                                                                                           |
| volume            | Yes       | Object | Specifies the volume information.<br>For details, see <a href="#">Table 5-240</a> .                                                                                                                                                                                                                                                       |
| 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 (,).<br>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. |
| restore_point     | Yes       | Object | Specifies the restoration information.<br>For details, see <a href="#">Table 5-241</a> .                                                                                                                                                                                                                                                  |

| 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.<br>For details, see <a href="#">Table 5-237</a> .<br>For details about versions for RDS for SQL Server restoration, see <a href="#">Table 5-238</a> . |
| ha               | No        | Object | Specifies the HA configuration parameters, which are used when creating primary/standby DB instances.<br>For details, see <a href="#">Table 5-236</a> .                                                                                                                                                                   |
| configuration_id | No        | String | Specifies the parameter template ID.                                                                                                                                                                                                                                                                                      |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| port      | No        | String | <p>Specifies the database port information.</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).</li> </ul> |

| Parameter             | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                |
|-----------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       |           |        | <p>For other editions, the port number can be set to 1433 or 2100 to 9500 (excluding 5355, 5985, and 5986).</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> <li>• RDS for PostgreSQL: <b>5432</b></li> <li>• RDS for SQL Server: <b>1433</b></li> </ul> |
| backup_strategy       | No        | Object | <p>Specifies the advanced backup policy.</p> <p>For details, see <a href="#">Table 5-239</a>.</p>                                                                                                                                                                                                                                                          |
| 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 | <p>Specifies the region ID. For details, see <a href="#">Regions and Endpoints</a>.</p> <p>This parameter is mandatory for RDS for SQL Server and RDS for PostgreSQL.</p>                                                                                                                                                                                  |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| vpc_id    | No        | String | <p>Specifies the VPC ID. 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> <p>This parameter is mandatory for RDS for SQL Server and RDS for PostgreSQL.</p> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| subnet_id | No        | String | <p>Specifies the subnet ID. 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> <p>This parameter is mandatory for RDS for SQL Server and RDS for PostgreSQL.</p> |



| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_vip  | No        | String | <p>Specifies the floating IP address of a DB instance. 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 subnet CIDR block 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         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| security_group_id | No        | String | <p>Specifies the security group which the RDS DB instance belongs to. 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 &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> <p>This parameter is mandatory for RDS for SQL Server.</p> <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</p> |

| 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 <a href="#">Table 5-242</a> . |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| time_zone | No        | String | <p>Specifies the UTC time zone.</p> <ul style="list-style-type: none"> <li>• If this parameter is not specified, the time zone of each 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> |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dsspool_id | No        | String | <p>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:</p> <ul style="list-style-type: none"> <li>• Method 1: Log in to the DSS console, view the DSS pool list, and select the desired DSS ID in the AZ.</li> <li>• Method 2: Query the DSS pool ID using the DSS API. For details, see <a href="#">Obtaining Details of DSS Storage Pools</a>.</li> </ul> |

| Parameter | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| collation | No        | String           | <p>This parameter applies only to RDS for SQL Server DB instances.</p> <p>Value range: character sets queried in <a href="#">Querying the Available SQL Server Character Set</a>.</p>                                                                                                                                                                                                                                                                                                                                                                  |
| tags      | No        | Array of objects | <p>Specifies the tag list. Each DB instance can be associated with tag key-value pairs while being created.</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 keys and values, separate them with commas (,). A maximum of 20 key-value pairs can be added for a DB instance.</p> <p>For details, see <a href="#">Table 5-243</a>.</p> |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dry_run   | No        | Boolean | <p>Specifies whether DB instances will not be created after the request is checked. This parameter is supported with MySQL 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> |

| Parameter       | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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><br/>Automatic minor version upgrade is enabled.</li> <li>• <b>false:</b><br/>Automatic minor version upgrade is disabled.</li> </ul> <p><b>Default Value</b><br/>false</p> |

**Table 5-236** ha field data structure description

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



| Parameter        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| replication_mode | Yes       | String | <p>Specifies the replication mode for the standby DB instance.</p> <p>The value cannot be empty.</p> <ul style="list-style-type: none"> <li>• RDS for MySQL: The value is <b>async</b> or <b>semisync</b>.</li> <li>• RDS for PostgreSQL: The value is <b>async</b> or <b>sync</b>.</li> <li>• 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 5-237** 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 | <p>Specifies the database version.</p> <ul style="list-style-type: none"> <li>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.</li> </ul> <p>For details about supported database versions, see <a href="#">Querying Version Information About a DB Engine</a>.</p> |

**Table 5-238** Version mapping for RDS for SQL Server restoration

| Original                 | Restore To                                                                                                                                                                                                   |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2008 R2 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 |

| Original                | Restore To                                                                                                                                                                                                                                                                                   |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                                                                                                     |
| 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                                                                                                                                                                                         |

| Original                | Restore To                                                           |
|-------------------------|----------------------------------------------------------------------|
| 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                                              |

**Table 5-239** backup\_strategy field data structure description

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_time | Yes       | String | <p>Specifies the backup time window. Automated backups will be triggered during the backup time window.</p> <p>The value cannot be empty. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format.</p> <ul style="list-style-type: none"> <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>Specifies the retention days for specific backup files.</p> <p>The value range is from 0 to 732. If this parameter is not specified or set to <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> |

**Table 5-240** volume field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | <p>Specifies the storage type.</p> <p>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 instances.</li> <li>● <b>ESSD:</b> extreme SSD storage.</li> </ul> |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                   |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| size      | Yes       | Integer | <p>Specifies the storage space.</p> <p>Its value range is from 40 to 4000, in GB. The value must be a multiple of 10.</p> <p><b>NOTICE</b></p> <p>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.</p> |

**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 | <p>Specifies the restoration mode. Enumerated values include:</p> <ul style="list-style-type: none"> <li>• <b>backup</b>: indicates restoration from backup files. In this mode, <b>backup_id</b> is mandatory when <b>type</b> is not mandatory.</li> <li>• <b>timestamp</b>: indicates point-in-time restoration. In this mode, <b>restore_time</b> is mandatory when <b>type</b> is mandatory.</li> </ul> |

| Parameter    | Mandatory | Type    | Description                                                                                                                                                                                                                    |
|--------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| backup_id    | No        | String  | <p>Specifies the ID of the backup used to restore data. This parameter must be specified when backups are used for restoration.</p> <p><b>NOTICE</b><br/>When <b>type</b> is not mandatory, <b>backup_id</b> is mandatory.</p> |
| restore_time | No        | Integer | <p>Specifies the time point of data restoration in the UNIX timestamp. The unit is millisecond and the time zone is UTC.</p> <p><b>NOTICE</b><br/>When <b>type</b> is mandatory, <b>restore_time</b> is mandatory.</p>         |

| Parameter     | Mandatory | Type                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|-----------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database_name | No        | Map<String, String> | <p>This parameter applies only to Microsoft SQL Server databases.</p> <ul style="list-style-type: none"> <li>• If this parameter is specified, you can restore all or specific databases and rename new databases.</li> <li>• If this parameter is not specified, all databases are restored by default.</li> <li>• 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.</li> <li>• Note the following when you are specifying new database names: <ul style="list-style-type: none"> <li>– New database names must be different from the original database names. If they are left</li> </ul> </li> </ul> |



| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <div>blank, the original database names will be used for restoration by default.</div> <div><div><div>- 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.</div><div>- New database names must be different from any database names on the original DB instance.</div><div>- The total number of new databases cannot exceed the database quota specified by <b>rds_databases_quota</b>.</div><div>- New database</div></div></div> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------|-----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p>names cannot contain the following fields (case-insensitive): rdsadmin, master, msdb, 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></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", "C": "B1,C1", "D": "D1,d1"},</pre> <p>Error causes are as follows:</p> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------|-----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ol style="list-style-type: none"> <li>1. The new database name (A) is the same as the original database name (A).</li> <li>2. The new database name (B1) is not unique.</li> <li>3. When the database name is case insensitive, the database names D1 and d1 conflict.</li> </ol> <p><b>CAUTION</b><br/>Before the restoration, make sure that the size of the restored data does not exceed the purchased disk capacity.</p> |

**Table 5-242** charge\_info field data structure description

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                               |
|-------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| charge_mode | Yes       | String | <p>Specifies the billing mode.</p> <p>Value range:</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> |

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_type   | No        | String  | <p>Specifies the subscription type.</p> <p>Value range:</p> <ul style="list-style-type: none"> <li>• <b>month</b>: indicates that the service is subscribed by month.</li> <li>• <b>year</b>: indicates that the service is subscribed by year.</li> </ul> <p><b>NOTE</b><br/>This parameter is valid and mandatory if <b>charge_mode</b> is set to <b>prePaid</b>.</p>                                                       |
| period_num    | No        | Integer | <p>Specifies the subscription period. This parameter is valid and mandatory if <b>charge_mode</b> is set to <b>prePaid</b>.</p> <p>Value range:</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>.</li> </ul> |
| is_auto_renew | No        | boolean | <p>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.</p> <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 | <p>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.</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>                    |

**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.<br>For details, see <a href="#">Table 5-245</a> .                                                                     |
| 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.<br>DB instances of the same type can have same names under the same tenant.  |
| status    | String | Indicates the DB instance status. For example, <b>BUILD</b> indicates that the DB instance is being created. |
| datastore | Object | Indicates the database information.<br>For details, see <a href="#">Table 5-246</a> .                        |



| Parameter        | Type   | Description                                                                                                                                                                 |
|------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ha               | Object | Indicates the HA configuration parameters. This parameter is returned only when primary/standby DB instances are created.<br>For details, see <a href="#">Table 5-247</a> . |
| 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 | <p>Indicates the database port information.</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>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> |

| Parameter              | Type   | Description                                                                                                                                                                                                                                                                                                                         |
|------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| backup_strategy        | Object | Indicates the automated backup policy.<br>For details, see <a href="#">Table 5-248</a> .                                                                                                                                                                                                                                            |
| enterprise_project_tag | String | Indicates the project ID.                                                                                                                                                                                                                                                                                                           |
| flavor_ref             | String | Indicates the specification ID.<br>For details, see <b>spec_code</b> in <a href="#">Table 5-13</a> in section <a href="#">Querying Database Specifications</a> .                                                                                                                                                                    |
| volume                 | Object | Indicates the volume information.<br>For details, see <a href="#">Table 5-249</a> .                                                                                                                                                                                                                                                 |
| 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: <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> |

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| subnet_id         | String | <p>Specifies the network ID. 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>                                                                                                                                |
| security_group_id | String | <p>Indicates the security group which the RDS DB instance belongs to. 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 &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> |
| 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.<br>For details, see <a href="#">Table 5-242</a> . |

**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: <ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>SQLServer</li> </ul> |
| version          | Yes       | String | Indicates the database version.<br>For details about supported database versions, see section <a href="#">Querying Version Information About a DB Engine</a> .                         |
| 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 <b>Ha</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| replication_mode | Yes       | String | <p>Indicates the replication mode for the standby DB instance.</p> <p>The value cannot be empty.</p> <ul style="list-style-type: none"> <li>• RDS for MySQL: The value is <b>async</b> or <b>semisync</b>.</li> <li>• RDS for PostgreSQL: The value is <b>async</b> or <b>sync</b>.</li> <li>• 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 5-248** backupStrategy field data structure description

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_time | Yes       | String | <p>Indicates the backup time window. Automated backups will be triggered during the backup time window.</p> <p>The value cannot be empty. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format.</p> <ul style="list-style-type: none"> <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>Indicates the retention days for specific backup files.</p> <p>The value range is from 0 to 732. If this parameter is not specified or set to <b>0</b>, the automated backup policy is disabled. To extend the retention period, contact customer service.</p> <p>Automated backups can be retained for up to 2,562 days.</p> |

**Table 5-249** volume field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                       |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | <p>Specifies the volume type.</p> <p>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 instances.</li> <li>• <b>ESSD:</b> extreme SSD storage.</li> </ul> |



| Parameter | Mandatory | Type    | Description                                                                                                      |
|-----------|-----------|---------|------------------------------------------------------------------------------------------------------------------|
| size      | Yes       | Integer | Indicates the volume size.<br><br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |

## 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. <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> . |
| 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 <a href="#">Table 5-255</a> . |

**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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| database_name | Yes       | DB engine. The value is <b>postgresql</b> (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 <a href="#">Table 5-259</a> . |

**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 <a href="#">Table 5-260</a> . |

**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 <a href="#">Table 5-261</a> . |

**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 <a href="#">Table 5-262</a> . |

**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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| engine     | Yes       | DB engine.<br>The value can be <b>mysql</b> or <b>postgresql</b> (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 <a href="#">Table 5-266</a> .                                                                                                                                                                         |

**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 <b>table_limit</b> . |
| databases    | Array of objects | Database information. For details, see <a href="#">Table 5-267</a> .                                                           |

**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 <b>table_limit</b> . |

- 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |

## Request

- Parameter description

**Table 5-269** Parameters

| Parameter | Mandatory | Type             | Description                                                       |
|-----------|-----------|------------------|-------------------------------------------------------------------|
| instances | No        | Array of objects | Table information. For details, see <a href="#">Table 5-270</a> . |

**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 <a href="#">Table 5-271</a> . |

**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 <a href="#">Table 5-272</a> . |

**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 <a href="#">Table 5-273</a> . |

**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 <a href="#">Table 5-275</a> . |

**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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |

## Request

**Table 5-277** Parameters

| Parameter | Mandatory | Type             | Description                                                          |
|-----------|-----------|------------------|----------------------------------------------------------------------|
| instances | Yes       | Array of objects | Instance information. For details, see <a href="#">Table 5-278</a> . |

**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 <a href="#">Table 5-279</a> . |



| Parameter       | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_fast_restore | No        | Boolean | <p>Whether to use fast restoration. The value can be <b>true</b> or <b>false</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> |

**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.<br>For details, see <a href="#">Table 5-281</a> . |

**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 | <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>The value cannot be empty.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| instance_id | Yes       | String | <b>Definition</b><br>Instance ID.<br><b>Constraints</b><br>The value cannot be empty.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                             |

| Parameter | Mandatory | Type   | Description                                                                                                                               |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------|
| backup_id | Yes       | String | <b>Definition</b><br>Backup ID.<br><b>Constraints</b><br>The value cannot be empty.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Database information. For details, see <a href="#">Table 5-284</a> .<br><b>Range</b><br>N/A |
| database_limit | Integer          | <b>Definition</b><br>Number of databases that can be restored from a backup.<br><b>Range</b><br>N/A              |
| bucket_name    | String           | <b>Definition</b><br>OBS bucket name.<br><b>Range</b><br>N/A                                                     |

**Table 5-284** databases field description

| Parameter        | Type   | Description                                                          |
|------------------|--------|----------------------------------------------------------------------|
| database_name    | String | <b>Definition</b><br>Database name.<br><b>Range</b><br>N/A           |
| backup_file_name | String | <b>Definition</b><br>Name of the backup file.<br><b>Range</b><br>N/A |
| backup_file_size | Long   | <b>Definition</b><br>Size of the backup file.<br><b>Range</b><br>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 | <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       | 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                                                                                             |

## Request

**Table 5-286** Parameters

| Parameter   | Mandatory | Type            | Description                                                                                                                                                                                                     |
|-------------|-----------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| backups     | Yes       | Array of String | <b>Definition</b><br>List of backup IDs.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The minimum number of elements in <b>backups</b> is 1, and each element must be unique.<br><b>Default Value</b><br>N/A |
| 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                                                                                            |
| destination | Yes       | String          | <b>Definition</b><br>Name of the destination OBS bucket.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>0 to 128 characters<br><b>Default Value</b><br>N/A                                                     |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| prefix    | No        | String | <b>Definition</b><br>Prefix of the storage location in the destination OBS bucket.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value can contain 0 to 128 characters and must end with a slash (/).<br><b>Default Value</b><br>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 | <b>Definition</b><br>Transfer task results. For details, see <a href="#">Table 5-288</a> . |



**Table 5-288** results field description

| Parameter | Type   | Description                                                                                                         |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------|
| backup_id | String | <b>Definition</b><br>Backup ID.<br><b>Range</b><br>N/A                                                              |
| status    | String | <b>Definition</b><br>Task submission status.<br><b>Range</b><br><b>Success:</b> The task is successfully submitted. |
| job_id    | String | <b>Definition</b><br>Task ID.<br><b>Range</b><br>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<br>ry | Type    | Description                                                                                                                                                                                                      |
|------------|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes           | String  | <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 |
| offset     | Yes           | Integer | <b>Definition</b><br>Page number.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The minimum value is <b>1</b> , indicating that the first page is queried.<br><b>Default Value</b><br>1                        |
| limit      | Yes           | Integer | <b>Definition</b><br>Number of records displayed on each page.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>Minimum value: <b>0</b><br><b>Default Value</b><br>10                                             |

**Table 5-290** Parameters

| Parameter      | Mandatory | Type   | Description                                                                                                              |
|----------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------|
| order_field    | No        | String | <b>Definition</b><br>Sorting field.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A   |
| order_rule     | No        | String | <b>Definition</b><br>Sorting rule.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A    |
| filter_field   | No        | String | <b>Definition</b><br>Filter fields.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A   |
| filter_content | No        | String | <b>Definition</b><br>Filter keywords.<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                                                                                                                                                                                                                                                         |
|---------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| begin_time    | No        | Long   | <b>Definition</b><br>Start timestamp.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                                                                            |
| end_time      | No        | Long   | <b>Definition</b><br>End timestamp.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                                                                              |
| transfer_type | No        | String | <b>Definition</b><br>Type of transfer tasks.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li><b>manual</b>: manual transfer task</li> <li><b>auto</b>: automatic transfer task</li> </ul> <b>Default Value</b><br><b>manual</b> |

## 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             | <b>Definition</b><br>Number of tasks.<br><b>Range</b><br>N/A                   |
| transfer_list | Array of objects | <b>Definition</b><br>Task list. For details, see <a href="#">Table 5-292</a> . |

**Table 5-292** transfer\_list field description

| Parameter  | Type   | Description                                                     |
|------------|--------|-----------------------------------------------------------------|
| id         | String | <b>Definition</b><br>Backup ID.<br><b>Range</b><br>N/A          |
| name       | String | <b>Definition</b><br>Backup name.<br><b>Range</b><br>N/A        |
| begin_time | Long   | <b>Definition</b><br>Task start time.<br><b>Range</b><br>N/A    |
| end_time   | Long   | <b>Definition</b><br>Task end time.<br><b>Range</b><br>N/A      |
| status     | String | <b>Definition</b><br>Task status.<br><b>Range</b><br>N/A        |
| size       | Double | <b>Definition</b><br>Object size, in KB.<br><b>Range</b><br>N/A |

| Parameter         | Type   | Description                                                                                                                                                                                                                                    |
|-------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_id       | String | <b>Definition</b><br>Instance ID.<br><b>Range</b><br>N/A                                                                                                                                                                                       |
| file_name         | String | <b>Definition</b><br>Name of the object to be transferred.<br><b>Range</b><br>N/A                                                                                                                                                              |
| destination       | String | <b>Definition</b><br>Destination bucket name.<br><b>Range</b><br>N/A                                                                                                                                                                           |
| backup_begin_time | Long   | <b>Definition</b><br>Start time for a backup transfer.<br><b>Range</b><br>N/A                                                                                                                                                                  |
| backup_end_time   | Long   | <b>Definition</b><br>End time for a backup transfer.<br><b>Range</b><br>N/A                                                                                                                                                                    |
| transfer_type     | String | <b>Definition</b><br>Type of a transfer task.<br><b>Range</b><br><ul style="list-style-type: none"> <li>• <b>manual</b>: manual transfer task</li> <li>• <b>auto</b>: automatic transfer task</li> </ul>                                       |
| type              | String | <b>Definition</b><br>Type of backups to be transferred.<br><b>Range</b><br><ul style="list-style-type: none"> <li>• <b>db</b>: automated backup</li> <li>• <b>log</b>: incremental backup</li> <li>• <b>snapshot</b>: manual backup</li> </ul> |

| Parameter | Type   | Description                                                                                                                                              |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| prefix    | String | <b>Definition</b><br>Prefix of the transfer destination.<br><br><b>Range</b><br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .                                                                                        |
| instance_id | String | Yes       | Instance ID.                                                                                                                                                                                    |
| action      | String | Yes       | The status to be queried. <ul style="list-style-type: none"><li>• <b>check</b>: Check the pre-upgrade check status.</li><li>• <b>upgrade</b>: Check the major version upgrade status.</li></ul> |

## 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. <ul style="list-style-type: none"><li>• <b>running</b>: The pre-check or major version upgrade is in progress.</li><li>• <b>success</b>: The pre-check or major version upgrade is successful.</li><li>• <b>failed</b>: The pre-check or major version upgrade fails.</li></ul> |
| target_version | String | Target version.                                                                                                                                                                                                                                                                                                               |
| start_time     | String | Start time 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, if the time zone offset is one hour, the value of <b>Z</b> is <b>+0100</b> .                                                        |

| Parameter             | Type   | Description                                                                                                                                                                                                                                                                                 |
|-----------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| check_expiration_time | String | Time when a check report expires. The format is yyyy-mm-ddThh:mm:ssZ.<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, if the time zone offset is one hour, the value of <b>Z</b> is <b>+0100</b> . |
| 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 "
}
```

- Abnormal 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                       |
| instance_id    | String  | Yes        | Instance ID.                                                                                                                                                                                                                                                                   |
| offset         | Integer | No         | Index offset. If <b>offset</b> is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is <b>0</b> 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 <b>10</b> . The value must be a positive integer. The minimum value is <b>1</b> and the maximum value is <b>100</b> .                                                                                                            |
| order          | String  | No         | Sorting order. <ul style="list-style-type: none"> <li>• <b>DESC</b>: descending order</li> <li>• <b>ASC</b>: ascending order</li> <li>• Default value: <b>desc</b></li> </ul>                                                                                                  |
| sort_field     | String  | No         | Sorting field. <ul style="list-style-type: none"> <li>• <b>check_time</b>: check time</li> <li>• <b>expiration_time</b>: expiration time</li> <li>• <b>check_time</b> is the default value.</li> </ul>                                                                         |
| target_version | String  | No         | Target version.                                                                                                                                                                                                                                                                |
| is_available   | Boolean | No         | Whether the check is valid. <ul style="list-style-type: none"> <li>• <b>true</b>: valid</li> <li>• <b>false</b>: invalid</li> </ul>                                                                                                                                            |

## 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.<br>For details, see <a href="#">Table 5-302</a> . |

**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.<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, if the time zone offset is one hour, the value of <b>Z</b> is <b>+0100</b> .      |
| expiration_time | String | Expiration time 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, if the time zone offset is one hour, the value of <b>Z</b> is <b>+0100</b> . |
| target_version  | String | Target version.                                                                                                                                                                                                                                                             |

| Parameter | Type   | Description                                                                                                                                                                                             |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| result    | String | Check results. <ul style="list-style-type: none"><li>• <b>success</b>: The check is successful.</li><li>• <b>failed</b>: The check fails.</li><li>• <b>running</b>: The check is in progress.</li></ul> |
| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | String | Yes       | Instance ID.                                                                                             |

## Request

- Request parameters

| Parameter      | Type   | Mandatory | Description                                                                                                                                                                  |
|----------------|--------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| target_version | String | Yes       | Target version.<br>It must be later than the current major version of the instance.<br>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. <ul style="list-style-type: none"> <li><b>true:</b> After the upgrade, the floating IP address is switched to the target instance.</li> <li><b>false:</b> After the upgrade, the floating IP address of the source instance remains unchanged, and the target instance uses a new floating IP address.</li> </ul>                                                             |
| statistics_collection_mode | String  | No        | Mode of collecting statistics. It is mandatory if <b>is_change_private_ip</b> is set to <b>true</b> . <ul style="list-style-type: none"> <li><b>before_change_private_ip:</b> Statistics are collected before the floating IP address of the source instance is switched to the target instance.</li> <li><b>after_change_private_ip:</b> Statistics are collected after the floating IP address of the source instance is switched to the target instance.</li> </ul> |

- 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |

| Parameter   | Type    | Mandatory | Description                                                                                                                                                                                                                                                                    |
|-------------|---------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_id | String  | Yes       | Instance ID.                                                                                                                                                                                                                                                                   |
| offset      | Integer | No        | Index offset. If <b>offset</b> is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is <b>0</b> 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 <b>10</b> . The value must be a positive integer. The minimum value is <b>1</b> and the maximum value is <b>100</b> .                                                                                                            |
| order       | String  | No        | Sorting order. <ul style="list-style-type: none"><li>• <b>DESC</b>: descending order</li><li>• <b>ASC</b>: ascending order</li><li>• Default value: <b>desc</b></li></ul>                                                                                                      |
| sort_field  | String  | No        | Sorting field. <ul style="list-style-type: none"><li>• <b>start_time</b>: specifies the start time.</li><li>• <b>end_time</b>: specifies the end time.</li><li>• <b>start_time</b> is the default value.</li></ul>                                                             |

## 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.<br>For details, see <a href="#">Table 5-307</a> . |

**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.<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, if the time zone offset is one hour, the value of <b>Z</b> is <b>+0100</b> . |
| end_time             | String | Upgrade end time 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, if the time zone offset is one hour, the value of <b>Z</b> is <b>+0100</b> .   |
| 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.<br><ul style="list-style-type: none"> <li>● <b>success</b>: The upgrade is successful.</li> <li>● <b>failed</b>: The upgrade fails.</li> <li>● <b>running</b>: The upgrade is in progress.</li> </ul>                                                          |

| Parameter                  | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_private_ip_changed      | Boolean | Whether to switch the floating IP address of the source instance to the target instance. <ul style="list-style-type: none"> <li>• <b>true</b>: indicates that the floating IP address of the source instance will be switched to the target instance.</li> <li>• <b>false</b>: indicates that the floating IP address of the source instance will not be switched to the target instance.</li> </ul> |
| private_ip_change_time     | String  | Time when the floating IP address is changed. The format is yyyy-mm-ddThh:mm:ssZ.<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, if the time zone offset is one hour, the value of <b>Z</b> is <b>+0100</b> .                                                                                              |
| statistics_collection_mode | String  | When to collect statistics. <ul style="list-style-type: none"> <li>• <b>before_change_private_ip</b>: Statistics are collected before the floating IP address is changed.</li> <li>• <b>after_change_private_ip</b>: Statistics are collected after the floating IP address is changed.</li> </ul>                                                                                                   |
| 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 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](#).

### 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       | <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/>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>                                                                        |



## Request

**Table 5-309** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_time | Yes       | String | <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>. The start time cannot be more than one month earlier than the current time.</p> <p><b>Default Value</b><br/>N/A</p> |
| end_time   | Yes       | String | <p><b>Definition</b><br/>End 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>. Only slow query logs generated within the past month can be queried.</p> <p><b>Default Value</b><br/>N/A</p>          |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | No        | String  | <p><b>Definition</b><br/>Statement type.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>If this parameter is left blank, all statement types are queried.<br/>Enumerated 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>                                                           |
| line_num  | No        | String  | <p><b>Definition</b><br/>Sequence number of a log event.</p> <p><b>Constraints</b><br/>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.</p> <p><b>Range</b><br/>The value of <b>line_num</b> should be between the values of <b>start_time</b> and <b>end_time</b>.</p> <p><b>Default Value</b><br/>N/A</p> |
| limit     | No        | Integer | <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/>If this parameter is not specified, the default value <b>10</b> is used.</p>                                                                                                                                                                  |

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| search_type | No        | String | <p><b>Definition</b><br/>Search mode. This parameter is used together with <b>line_num</b>.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li><b>forwards</b>: Search forwards starting from <b>line_num</b>.</li> <li><b>backwards</b>: Search backwards starting from <b>line_num</b>.</li> </ul> <p><b>Default Value</b><br/>forwards</p> |
| database    | No        | String | <p><b>Definition</b><br/>Database name.</p> <p><b>Constraints</b><br/>It cannot contain special characters such as &lt; &gt; &amp;.</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p>                                                                                                                                                                                     |

## 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 | <b>Definition</b><br>Slow query logs.<br>For details, see <a href="#">Table 5-311</a> . |
| long_query_time | String           | <b>Definition</b><br>Threshold for slow query logs.<br><b>Range</b><br>N/A              |

**Table 5-311** 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. Only RDS for MySQL supports this parameter.<br><b>Range</b><br>N/A         |
| rows_sent     | String | <b>Definition</b><br>Number of sent rows. Only RDS for MySQL supports this parameter.<br><b>Range</b><br>N/A    |
| rows_examined | String | <b>Definition</b><br>Number of scanned rows. Only RDS for MySQL supports this parameter.<br><b>Range</b><br>N/A |

| Parameter    | Type   | Description                                                                                                                                                                             |
|--------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database     | String | <b>Definition</b><br>Database which slow logs belong to. If any database name contains special characters such as < > ', the special characters will be escaped.<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                                                                                                                                 |
| line_num     | String | <b>Definition</b><br>Sequence number of a log event.<br><b>Range</b><br>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 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](#).

### 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<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> . 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.<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> . Only error logs generated in the past month can be queried.                   |
| level      | No        | String | Log level. The default value is <b>ALL</b> .<br>Enumerated values: <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>                                                                                                          |
| 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 <b>line_num</b> should be between the values of <b>start_time</b> and <b>end_time</b> .                                      |

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                               |
|-------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| search_type | No        | String  | Search mode. The default value is <b>forwards</b> . This parameter is used together with <b>line_num</b> . The search starts from <b>line_num</b> 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 <b>10</b> .                                                               |

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.<br>For details, see <a href="#">Table 5-315</a> . |

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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<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> .                                                          |
| end_date   | Yes       | End time 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> .<br>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 <b>1</b> 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 <b>10</b> by default if it is not specified.                                                                                                                                                                                        |
| level      | No        | Log level. The default value is <b>ALL</b> . Valid values: <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>                                                                                      |

## 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.<br>For details, see <a href="#">Table 5-318</a> . |
| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                                                       |
| instance_id | Yes       | ID of the instance to be queried.                                                                                                                                                                                                                                                                                              |
| start_date  | Yes       | Start time 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> .                                                            |
| end_date    | Yes       | End time 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> . You can only query slow query logs generated within a month. |

| Parameter | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset    | No        | Page offset, for example, <b>1</b> , <b>2</b> , <b>3</b> , or <b>4</b> . If this parameter is not specified, the default value is <b>1</b> , indicating that data on the first page is queried.<br><br>The latest 2,000 slow query logs can be queried. The value of <b>offset</b> multiplied by the value of <b>limit</b> must be no more than 2,000. For example, if the value of <b>offset</b> is set to <b>200</b> , and the value of <b>limit</b> cannot be greater than <b>10</b> . |
| limit     | No        | Number of records on each page. Its value range is from 1 to 100. The parameter value is <b>10</b> by default if it is not specified.                                                                                                                                                                                                                                                                                                                                                     |
| type      | No        | Statement type. If it is left blank, all statement types are queried. Valid value: <ul style="list-style-type: none"> <li>• INSERT</li> <li>• UPDATE</li> <li>• SELECT</li> <li>• DELETE</li> <li>• CREATE</li> </ul>                                                                                                                                                                                                                                                                     |

## 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.<br><br>For details, see <a href="#">Table 5-321</a> . |

| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .                                                                                                        |
| instance_id | Yes       | String | ID of the instance to be queried.                                                                                                                                                                               |
| status      | Yes       | String | Whether to enable Show Original Log. The value can be <b>on</b> or <b>off</b> . <ul style="list-style-type: none"><li>• <b>on</b>: Enable this function.</li><li>• <b>off</b>: Disable this function.</li></ul> |

## 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                     |
| instance_id | Yes       | ID of the instance to be queried.                                                                                                                                                                                                                            |
| offset      | No        | Index offset.<br>If <b>offset</b> is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is <b>0</b> 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 <b>10</b> by default if it is not specified.                                                                                                                        |

## Request

- Request parameters  
None
- URI example  
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/cee5265e1e5845649e354841234567d/in01/slowlog-files

## Response

- Normal response

**Table 5-324** Parameters

| Parameter   | Type             | Description                                                               |
|-------------|------------------|---------------------------------------------------------------------------|
| list        | Array of objects | Slow log file information. For details, see <a href="#">Table 5-325</a> . |
| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | ID of the instance to be queried.                                                                        |

| Parameter | Mandatory | Description                                                                                                                                                                                                                                                                       |
|-----------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset    | No        | Index offset.<br>If <b>offset</b> is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is <b>0</b> 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 <b>10</b> .                                                                                                                                                                                  |

## Request

- Request parameters  
None
- URI example  
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/cee5265e1e5845649e354841234567d/fin01/xellog-files

## Response

- Normal response

**Table 5-327** Parameters

| Parameter | Type             | Description                                                                   |
|-----------|------------------|-------------------------------------------------------------------------------|
| list      | Array of objects | Extended log file information. For details, see <a href="#">Table 5-328</a> . |
| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br><br>You can obtain the file name from <a href="#">Querying Extended Logs (RDS for SQL Server)</a> . |

## 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 <a href="#">Table 5-332</a> . |
| 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. <ul style="list-style-type: none"> <li><b>FINISH</b>: The download link has been generated.</li> <li><b>EXPORTING</b>: The file is being generated.</li> <li><b>FAILED</b>: The log file fails to be prepared.</li> </ul> |
| file_size | String | File size in KB.                                                                                                                                                                                                                                         |
| file_link | String | Download link. If the link generation status is <b>EXPORTING</b> or <b>FAILED</b> , 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<br>ory | 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 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.<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> .                                 |
| end_date   | Yes       | Specifies the end time 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> .                                   |
| type       | Yes       | Specifies the statement type. If it is left blank, all statement types are queried. Valid value: <ul style="list-style-type: none"> <li>• INSERT</li> <li>• UPDATE</li> <li>• SELECT</li> <li>• DELETE</li> <li>• CREATE</li> <li>• ALL</li> </ul>                                                                |
| sort       | No        | Specifies the sorting mode. <ul style="list-style-type: none"> <li>• <b>executeTime</b>: indicates sorting slow query logs by execution time in descending order.</li> <li>• If this parameter is left empty or set to other values, the slow query logs are sorted by executions in descending order.</li> </ul> |

## 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 <a href="#">Table 5-335</a> .             |
| 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       | <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>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

**Table 5-337** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_name | No        | String | <b>Definition</b><br>Name of the file to be downloaded.<br>To obtain the file name, click the instance name on the console and choose <b>Logs &gt; Slow Query Logs</b> .<br><b>Constraints</b><br>This parameter is mandatory for Microsoft SQL Server.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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    | <b>Definition</b><br>Indicates the links for downloading slow query logs.<br>For details, see <a href="#">Table 5-339</a> .                                                                                                                                                                                                                                                     |
| status    | String  | <b>Definition</b><br>Indicates the status of generating links for downloading slow query logs.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>FINISH</b>: The download link has been generated.</li> <li>• <b>CREATING</b>: A file is being generated and the download link is to be prepared.</li> <li>• <b>FAILED</b>: Log files fail to be prepared.</li> </ul> |
| count     | Integer | <b>Definition</b><br>Indicates the number of links for downloading slow query logs.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                      |

**Table 5-339** linkInfo field data structure description

| Parameter   | Type   | Description                                                                                       |
|-------------|--------|---------------------------------------------------------------------------------------------------|
| workflow_id | String | <b>Definition</b><br>Task ID.<br><b>Range</b><br>For the MySQL DB engine, the value is always "". |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_name | String | <b>Definition</b><br>Indicates the name of the generated file for downloading slow query logs.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                          |
| status    | String | <b>Definition</b><br>Indicates the generation status of the current link.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>EXPORTING</b>: indicates that the download link is being generated.</li> <li>• <b>SUCCESS</b>: indicates that the download link is successfully generated.</li> <li>• <b>FAILED</b>: indicates that the download link failed to be generated.</li> </ul> |
| file_size | String | <b>Definition</b><br>Indicates the file size in KB.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                     |
| file_link | String | <b>Definition</b><br>Indicates the download link. The link is valid for 5 minutes.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                      |
| create_at | Long   | <b>Definition</b><br>Indicates the generation time.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                     |

| Parameter | Type | Description                                                            |
|-----------|------|------------------------------------------------------------------------|
| update_at | Long | <b>Definition</b><br>Indicates the update time.<br><b>Range</b><br>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       | <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

- 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 | <b>Definition</b><br>List of links for downloading error logs. For details, see <a href="#">Table 5-342</a> .                                                                                                                                                                                                                                    |
| status    | String           | <b>Definition</b><br>Status of the error log download link.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>FINISH</b>: The download link has been generated.</li> <li>• <b>CREATING</b>: A file is being generated and the download link is being prepared.</li> <li>• <b>FAILED</b>: The log file fails to be prepared.</li> </ul> |
| count     | Integer          | <b>Definition</b><br>Number of error log links.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                           |

**Table 5-342** Data structure description of the list field

| Parameter   | Type   | Description                                                                             |
|-------------|--------|-----------------------------------------------------------------------------------------|
| workflow_id | String | <b>Definition</b><br>Task ID.<br><b>Range</b><br>N/A                                    |
| file_name   | String | <b>Definition</b><br>Name of the generated file for downloading.<br><b>Range</b><br>N/A |



| Parameter | Type   | Description                                                             |
|-----------|--------|-------------------------------------------------------------------------|
| status    | String | <b>Definition</b><br>Status of the current link.<br><b>Range</b><br>N/A |
| file_size | String | <b>Definition</b><br>File size.<br><b>Range</b><br>N/A                  |
| file_link | String | <b>Definition</b><br>Download link.<br><b>Range</b><br>N/A              |
| create_at | Long   | <b>Definition</b><br>Generation time.<br><b>Range</b><br>N/A            |
| update_at | Long   | <b>Definition</b><br>Update time.<br><b>Range</b><br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

## Request

**Table 5-344** Parameters

| Parameter         | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                      |
|-------------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| keep_days         | Yes       | Integer | <p>Number of days for storing audit logs. The value range is from 0 to 732.</p> <ul style="list-style-type: none"> <li>• <b>0</b>: indicates that SQL audit is disabled.</li> <li>• <b>1 to 732</b>: indicates the retention days for audit logs after SQL audit is enabled.</li> </ul>                                                                          |
| reserve_auditlogs | No        | Boolean | <p>This parameter is valid only when SQL audit is disabled.</p> <ul style="list-style-type: none"> <li>• <b>true</b> (default): indicates that historical audit logs will be reserved for some time when SQL audit is disabled.</li> <li>• <b>false</b>: indicates that historical audit logs will be deleted immediately when SQL audit is disabled.</li> </ul> |

| Parameter   | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| audit_types | No        | Array of strings | <p>This parameter applies only to RDS for MySQL.</p> <p>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.</p> <ul style="list-style-type: none"> <li>CREATE_USER, DROP_USER, RENAME_USER, GRANT, REVOKE, ALTER_USER, ALTER_USER_DEFAULT_ROLE</li> <li>CREATE, ALTER, DROP, RENAME, TRUNCATE, REPAIR, OPTIMIZE</li> <li>INSERT, DELETE, UPDATE, REPLACE, SELECT</li> <li>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</li> </ul> |

## 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 | <b>Definition</b><br>Result of setting SQL audit.<br><b>Range</b><br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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 <b>0</b> 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       | <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_time  | Yes       | <p><b>Definition</b><br/>Query 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_time    | Yes       | <p><b>Definition</b><br/>Query end 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. The end time must be later than the start time and the time span cannot be longer than 30 days.<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    | Yes       | <b>Definition</b><br>Index offset. If <b>offset</b> is set to <i>N</i> , the query starts from the <i>N</i> +1 piece of data. The value <b>0</b> indicates that the query starts from the first piece of data.<br><b>Constraints</b><br>The value must be a non-negative number.<br><b>Range</b><br>An integer greater than or equal to 0<br><b>Default Value</b><br>0 |
| limit     | Yes       | <b>Definition</b><br>Number of records to be queried.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>[1, 50]<br><b>Default Value</b><br>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 | <b>Definition</b><br>Indicates detailed information.<br>For details, see <a href="#">Table 5-350</a> . |

| Parameter    | Type    | Description                                                                        |
|--------------|---------|------------------------------------------------------------------------------------|
| total_record | Integer | <b>Definition</b><br>Indicates the total number of records.<br><b>Range</b><br>N/A |

**Table 5-350** auditlogs field data structure description

| Parameter  | Type   | Description                                                                                                                                                                                                                                                                                                                                              |
|------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id         | String | <b>Definition</b><br>Indicates the audit log ID. For the SQL Server engine, the ID is the audit log file name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                    |
| name       | String | <b>Definition</b><br>Indicates the audit log file name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                           |
| size       | double | <b>Definition</b><br>Indicates the size in KB of the audit log.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                   |
| begin_time | String | <b>Definition</b><br>Indicates the start time of the audit log.<br><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> . |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| end_time  | String | <p><b>Definition</b></p> <p>Indicates the end time of the audit log.</p> <p><b>Range</b></p> <p>The value is in the "yyyy-mm-ddThh:mm:ssZ" format.</p> <p><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> |

- 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>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 <b>successful</b> 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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 <b>time</b> or <b>fast</b> . <ul style="list-style-type: none"><li><b>time</b>: indicates that binlogs are retained by time.</li><li><b>fast</b>: indicates that binlogs are not retained.</li></ul> |

- 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  | <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>                                                                                         |
| engine     | Yes       | String  | <p><b>Definition</b><br/>DB engine type.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/><b>mysql</b>, <b>postgresql</b>, and <b>sqlserver</b>, which are case insensitive.</p> <p><b>Default Value</b><br/>N/A</p>                                                                                                   |
| offset     | No        | Integer | <p><b>Definition</b><br/>Index offset.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>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.</p> <p><b>Default Value</b><br/><b>0</b>: The query starts from the first data record.</p> |

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                            |
|---------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit         | No        | Integer | <b>Definition</b><br>Number of records returned by a query.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value must be a positive integer ranging from 1 to 100.<br><b>Default Value</b><br>100 |
| instance_name | No        | String  | <b>Definition</b><br>Instance name, which can be used for filtering.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                |
| instance_id   | No        | String  | <b>Definition</b><br>Instance ID, which can be used for filtering.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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          | <b>Definition</b><br>Total number of results.<br><b>Range</b><br>N/A                                 |
| instance_lts_configs | Array of objects | <b>Definition</b><br>Instance LTS configuration list. For details, see <a href="#">Table 5-361</a> . |

**Table 5-361** instance\_lts\_configs field description

| Parameter   | Type             | Description                                                                                    |
|-------------|------------------|------------------------------------------------------------------------------------------------|
| lts_configs | Array of objects | <b>Definition</b><br>LTS configuration details. For details, see <a href="#">Table 5-362</a> . |
| instance    | object           | <b>Definition</b><br>Instance details. For details, see <a href="#">Table 5-363</a> .          |

**Table 5-362** lts\_configs field description

| Parameter     | Type   | Description                                                    |
|---------------|--------|----------------------------------------------------------------|
| log_type      | String | <b>Definition</b><br>Log type.<br><b>Range</b><br>N/A          |
| lts_group_id  | String | <b>Definition</b><br>LTS log group ID.<br><b>Range</b><br>N/A  |
| lts_stream_id | String | <b>Definition</b><br>LTS log stream ID.<br><b>Range</b><br>N/A |

| Parameter | Type    | Description                                                                         |
|-----------|---------|-------------------------------------------------------------------------------------|
| enabled   | Boolean | <b>Definition</b><br>Whether to enable log reporting to LTS.<br><b>Range</b><br>N/A |

**Table 5-363** instance field description

| Parameter   | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id          | String | <b>Definition</b><br>Instance ID.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| name        | String | <b>Definition</b><br>Instance name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| engine_name | String | <b>Definition</b><br>DB engine name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| status      | String | <b>Definition</b><br>Instance status.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>creating</b>: The instance is being created.</li> <li>• <b>createfail</b>: The instance failed to be created.</li> <li>• <b>normal</b>: The instance is normal.</li> <li>• <b>abnormal</b>: The instance is abnormal.</li> <li>• <b>data_disk_full</b>: The instance storage is full.</li> <li>• <b>deleted</b>: The instance has been deleted.</li> <li>• <b>shutdown</b>: The instance is stopped.</li> </ul> |

| Parameter             | Type             | Description                                                                                  |
|-----------------------|------------------|----------------------------------------------------------------------------------------------|
| enterprise_project_id | String           | <b>Definition</b><br>Enterprise project ID.<br><b>Range</b><br>0: default enterprise project |
| actions               | Array of strings | <b>Definition</b><br>Task that is being executed on the instance.<br><b>Range</b><br>N/A     |

- Example normal response

```
{
 "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",
 "status": "ACTIVE",
 "enterprise_project_id": 0,
 "actions": ["BACKUP"]
 },
 "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](#).

# 5.12 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       | <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 |

**Table 5-365** Request parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                 |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| engine    | Yes       | String | <b>Definition</b><br>Engine type.<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 |

## 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 | <b>Definition</b><br>Diagnosis details.<br>For details, see <a href="#">Table 5-367</a> . |

**Table 5-367** diagnosis field data structure description

| Parameter | Type    | Description                                                      |
|-----------|---------|------------------------------------------------------------------|
| name      | String  | <b>Definition</b><br>Diagnosis item.<br><b>Range</b><br>N/A      |
| count     | Integer | <b>Definition</b><br>Number of instances.<br><b>Range</b><br>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       | <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 |



**Table 5-369** Request parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                    |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| engine    | Yes       | String | <b>Definition</b><br>Engine type.<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                                                                                                                                                      |
| diagnosis | Yes       | String | <b>Definition</b><br>Diagnosis item.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li>high_pressure</li> <li>lock_wait</li> <li>insufficient_capacity</li> <li>slow_sql_frequency</li> <li>disk_performance_cap</li> <li>mem_overrun</li> <li>age_exceed</li> <li>connections_exceed</li> </ul> <b>Default Value</b><br>N/A |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset    | No        | Integer | <b>Definition</b><br>Index offset. The query starts from the next piece of data indexed by this parameter.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value must be a non-negative number.<br><b>Default Value</b><br>The default value is <b>0</b> , indicating that the query starts from the first data record. |
| limit     | No        | Integer | <b>Definition</b><br>Number of returned results.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>10                                                                                                                                                                                          |

## Request

- Request parameters  
None
- URI example  
GET [https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/diagnosis/info?engine=sqlserver&diagnosis=high\\_pressure&offset=1&limit=10](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           | <b>Definition</b><br>Diagnosis item.<br><b>Range</b> <ul style="list-style-type: none"> <li>• high_pressure</li> <li>• lock_wait</li> <li>• insufficient_capacity</li> <li>• slow_sql_frequency</li> <li>• disk_performance_cap</li> <li>• mem_overrun</li> <li>• age_exceed</li> <li>• connections_exceed</li> </ul> |
| total_count | Integer          | <b>Definition</b><br>Number of instances.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                      |
| instances   | Array of objects | <b>Definition</b><br>Specifies the DB instance ID.<br>For details, see <a href="#">Table 5-371</a> .                                                                                                                                                                                                                  |

**Table 5-371** instances field data structure description

| Parameter | Type   | Description                                                        |
|-----------|--------|--------------------------------------------------------------------|
| id        | String | <b>Definition</b><br>Specifies the DB instance ID.<br><b>Range</b> |

- 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       | <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 5-373** 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                                                                              |
| query_id  | No        | Long   | <b>Definition</b><br>Internal hash code calculated by the SQL parse tree.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>-9223372036854775808~<br>9223372036854775807<br><b>Default Value</b><br>0 |

| Parameter       | Mandatory | Type    | Description                                                                                                                                                                                                                                                            |
|-----------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| query_string    | No        | String  | <p><b>Definition</b><br/>Text format of an SQL statement.</p> <p><b>Constraints</b><br/>Only either <b>query_id</b> or <b>query_string</b> can be specified.</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p>                                       |
| max_concurrency | Yes       | Integer | <p><b>Definition</b><br/>Number of SQL statements that can be executed at the same time.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>-1–50000. If the value is less than or equal to 0, the number is not limited.</p> <p><b>Default Value</b><br/>0</p> |
| max_waiting     | Yes       | Integer | <p><b>Definition</b><br/>Maximum waiting time, in seconds.</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>                                                                                                       |
| search_path     | No        | String  | <p><b>Definition</b><br/>Schema search order set for names that are not schema-qualified.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>public</p>                                                                     |

## 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 | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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       | <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 5-376** Parameters

| Parameter | Man<br>dator<br>y | 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          |
| id        | Yes               | String | <b>Definition</b><br>SQL throttling rule ID.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

## Example Request

```
DELETE https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/49b9dd1d6f464ba4bc91df5cbd2e52eb03/sql-limit
{
 "db_name": "postgres",
 "id": "1"
}
```

## Response

- Normal response

Table 5-377 Parameters

| Parameter | Type   | Description                                                                                                     |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| resp      | String | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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       | <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 5-379** 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 |

| Parameter       | Mandatory | Type    | Description                                                                                                                                                                                                                                     |
|-----------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id              | Yes       | String  | <b>Definition</b><br>SQL throttling rule ID.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                                                 |
| max_concurrency | Yes       | Integer | <b>Definition</b><br>Number of SQL statements that can be executed at the same time.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>-1–50000. If the value is less than or equal to 0, the number is not limited.<br><b>Default Value</b><br>0 |
| max_waiting     | Yes       | Integer | <b>Definition</b><br>Maximum waiting time, in seconds.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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<br>dato<br>ry | Type    | Description                                                                                                                                                                                                                                                                                                                 |
|-------------|-------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id  | Yes               | String  | <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               | 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                                                                                                                                                                                                        |
| 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                                                                                                                                                                                                      |
| offset      | No                | Integer | <b>Definition</b><br>Index offset. The query starts from the next piece of data indexed by this parameter.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value must be a non-negative number.<br><b>Default Value</b><br>The default value is <b>0</b> , indicating that the query starts from the first data record. |

| Parameter | Mandatory | Type    | Description                                                                                                                                     |
|-----------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| limit     | No        | Integer | <b>Definition</b><br>Number of records returned by a query.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>1-100<br><b>Default Value</b><br>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          | <b>Definition</b><br>Number of SQL throttling rules.<br><b>Range</b><br>N/A                         |
| sql_limit_objects | Array of objects | <b>Definition</b><br>SQL throttling rule details.<br>For details, see <a href="#">Table 5-383</a> . |

**Table 5-383** sql\_limit\_objects field data structure description

| Parameter       | Type    | Description                                                                                                                                                                                                           |
|-----------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id              | String  | <b>Definition</b><br>SQL throttling rule ID.<br><b>Range</b><br>N/A                                                                                                                                                   |
| query_id        | String  | <b>Definition</b><br>Internal hash code calculated by the SQL parse tree.<br><b>Range</b><br>-9223372036854775808 to 9223372036854775807. The default value is <b>0</b> .                                             |
| query_string    | String  | <b>Definition</b><br>Text format of an SQL statement.<br><b>Range</b><br>N/A                                                                                                                                          |
| max_concurrency | Integer | <b>Definition</b><br>Number of SQL statements that can be executed at the same time.<br><b>Range</b><br>-1–50000. If the value is less than or equal to 0, the number is not limited. The default value is <b>0</b> . |
| is_effective    | Boolean | <b>Definition</b><br>Whether the rule is effective.<br><b>Range</b><br>N/A                                                                                                                                            |
| max_waiting     | Integer | <b>Definition</b><br>Maximum waiting time, in seconds.<br><b>Range</b><br>N/A                                                                                                                                         |
| search_path     | String  | <b>Definition</b><br>Schema search order set for names that are not schema-qualified.<br><b>Range</b><br>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       | <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 5-385** 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 |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                    |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | Yes       | String | <b>Definition</b><br>SQL throttling rule ID.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                                                                                                                                                                |
| action    | Yes       | String | <b>Definition</b><br>Action applied to the SQL throttling rule.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li><b>open</b>: Enable the SQL throttling rule.</li> <li><b>close</b>: Disable the SQL throttling rule.</li> <li><b>disable_all</b>: Disable all SQL throttling rules.</li> </ul> <b>Default Value</b><br>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 | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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       | <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/>You can obtain the value of this parameter from the <b>id</b> field in <a href="#">Table 5-116</a>.</p> <p><b>Default Value</b><br/>N/A</p> |

## Request

**Table 5-388** Parameters

| Parameter  | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| flavor_ref | Yes       | String  | <p><b>Definition</b><br/>Specification code of the database proxy.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>When the site supports the database proxy in primary/standby mode, this parameter does not take effect.</li> <li>When the site supports the database proxy in cluster mode, set this parameter to the value of <b>code</b> in the response body in <a href="#">Querying Database Proxy Specifications</a>.</li> </ul> <p><b>Default Value</b><br/>N/A</p>                                         |
| node_num   | Yes       | Integer | <p><b>Definition</b><br/>Number of database proxy nodes.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>When the site supports the database proxy in primary/standby mode, set this parameter to <b>2</b>.</li> <li>When the site supports the database proxy in cluster mode, the minimum value of this parameter is <b>2</b>. For the maximum value, see the value of <b>max_proxy_node_num</b> in the response body in <a href="#">Querying Database Proxies</a>.</li> </ul> <p><b>Default Value</b><br/>N/A</p> |

| Parameter  | Man<br>dator<br>y | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------|-------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| proxy_name | No                | String  | <p><b>Definition</b><br/>Name of the database proxy. Database proxies of the same type can have the same name under the same tenant.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The name must start with a letter and consist of 4 to 64 characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.<br/>If this parameter is not specified or the site supports only the database proxy in primary/standby mode, a random name will be generated.</p> <p><b>Default Value</b><br/>N/A</p> |
| proxy_mode | No                | String  | <p><b>Definition</b><br/>Read/write mode of the database proxy.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>readwrite</b> (default value): readable and writable</li> <li>• <b>readonly</b>: read-only</li> </ul> <p><b>Default Value</b><br/>N/A</p>                                                                                                                                                                                                                            |
| route_mode | No                | Integer | <p><b>Definition</b><br/>Routing policy of the database proxy.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>0</b>: weighted</li> <li>• <b>1</b>: load balancing (The primary node does not process read requests.)</li> <li>• <b>2</b>: load balancing (The primary node processes read requests.)</li> </ul> <p><b>Default Value</b><br/>N/A</p>                                                                                                                                 |

| Parameter         | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| nodes_read_weight | Yes       | Array of objects | <p><b>Definition</b><br/>Read weights of database nodes. For details, see <a href="#">Table 5-389</a>.</p> <p><b>Constraints</b></p> <ul style="list-style-type: none"> <li>If <b>proxy_mode</b> is set to <b>readonly</b>, you need to configure a weight for at least one read replica.</li> <li>If <b>route_mode</b> is set to a value greater than 0, the weight configured for the primary instance does not take effect.</li> </ul> |
| subnet_id         | No        | String           | <p><b>Definition</b><br/>Subnet ID in the VPC hosting the DB instance.</p> <p><b>Constraints</b><br/>To use this parameter, contact customer service.</p> <p><b>Range</b><br/>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.</p> <p><b>Default Value</b><br/>N/A</p>                                                                 |

**Table 5-389** nodes\_read\_weight field data structure description

| Parameter   | Mandatory | Type   | Description                                                                                                                                 |
|-------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------|
| instance_id | Yes       | String | <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> |



| Parameter | Mandatory | Type    | Description                                                                                                                   |
|-----------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------|
| weight    | Yes       | Integer | <b>Definition</b><br>Read weight assigned.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Task ID.<br><b>Range</b><br>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       | <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

- 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 | <b>Definition</b><br>List of database proxies under a DB instance.<br>For details, see <a href="#">Table 5-393</a> . |
| max_proxy_num         | Integer          | <b>Definition</b><br>Maximum number of database proxies that can be enabled at the same time.<br><b>Range</b><br>N/A |
| max_proxy_node_num    | Integer          | <b>Definition</b><br>Maximum number of nodes allowed for one database proxy.<br><b>Range</b><br>N/A                  |

| Parameter                                      | Type    | Description                                                                                                            |
|------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------|
| support_balance_route_mode_for_favored_version | Boolean | <b>Definition</b><br>Whether load balancing can be configured when a database proxy is created.<br><b>Range</b><br>N/A |

**Table 5-393** proxy\_query\_info\_list field data structure description

| Parameter                         | Type             | Description                                                                                                                 |
|-----------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------|
| proxy                             | Object           | <b>Definition</b><br>Database proxy information.<br>For details, see <a href="#">Table 5-394</a> .                          |
| master_instance                   | Object           | <b>Definition</b><br>Primary instance information.<br>For details, see <a href="#">Table 5-397</a> .                        |
| readonly_instances                | Array of objects | <b>Definition</b><br>Read replica information.<br>For details, see <a href="#">Table 5-397</a> .                            |
| proxy_security_group_check_result | Boolean          | <b>Definition</b><br>Whether the security group allows the database proxy to access the DB instance.<br><b>Range</b><br>N/A |

**Table 5-394** proxy field data structure description

| Parameter | Type   | Description                                                    |
|-----------|--------|----------------------------------------------------------------|
| pool_id   | String | <b>Definition</b><br>Database proxy ID.<br><b>Range</b><br>N/A |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | String | <p><b>Definition</b><br/>Database proxy status.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>ENABLING</b>: The database proxy is being enabled.</li> <li>• <b>DISABLING</b>: The database proxy is being disabled.</li> <li>• <b>CHANGING_NODE_NUM</b>: The number of nodes is being changed for the database proxy.</li> <li>• <b>SCALING</b>: The specifications of the database proxy are being changed.</li> <li>• <b>UPGRADING</b>: The kernel version of the database proxy is being upgraded.</li> <li>• <b>IPMODIFYING</b>: The read/write splitting address of the database proxy is being changed.</li> <li>• <b>RESTARTING</b>: The database proxy is being restarted.</li> <li>• <b>TRANSACTION_SPLITTING</b>: Transaction splitting is being enabled or disabled for the database proxy.</li> <li>• <b>CONNECTION_POOL_SWITCH_OPERATING</b>: The session connection pool type is being changed for the database proxy.</li> <li>• <b>PORT_MODIFYING</b>: The port of the database proxy is being changed.</li> <li>• <b>PROXY_SSL_SWITCHING</b>: The SSL status is being changed for the database proxy.</li> <li>• <b>ALT_SWITCH_OPERATING</b>: The ALT status is being changed for the database proxy.</li> <li>• <b>CHANGING_RESOURCES</b>: Resources are being changed for the database proxy.</li> <li>• <b>NORMAL</b>: The database proxy is running properly.</li> <li>• <b>ABNORMAL</b>: The database proxy is not running properly.</li> <li>• <b>FAILED</b>: The database proxy failed to be created.</li> <li>• <b>FROZEN</b>: The database proxy is frozen.</li> </ul> |

| Parameter                      | Type                | Description                                                                                                                                         |
|--------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| address                        | String              | <b>Definition</b><br>Read/write splitting address.<br><b>Range</b><br>N/A                                                                           |
| port                           | Integer             | <b>Definition</b><br>Port number.<br><b>Range</b><br>N/A                                                                                            |
| delay_thresh<br>old_in_seconds | Integer             | <b>Definition</b><br>Delay threshold, in seconds.<br><b>Range</b><br>N/A                                                                            |
| cpu                            | String              | <b>Definition</b><br>vCPUs of the database proxy.<br><b>Range</b><br>N/A                                                                            |
| mem                            | String              | <b>Definition</b><br>Memory size of the database proxy.<br><b>Range</b><br>N/A                                                                      |
| node_num                       | Integer             | <b>Definition</b><br>Number of database proxy nodes.<br><b>Range</b><br>N/A                                                                         |
| nodes                          | Array of<br>objects | <b>Definition</b><br>List of database proxy nodes.<br>For details, see <a href="#">Table 5-395</a> .                                                |
| mode                           | String              | <b>Definition</b><br>Database proxy mode.<br><b>Range</b><br><ul style="list-style-type: none"> <li>Cluster</li> <li>Ha: primary/standby</li> </ul> |
| flavor_info                    | Object              | <b>Definition</b><br>Database proxy specifications.<br>For details, see <a href="#">Table 5-396</a> .                                               |

| Parameter            | Type   | Description                                                                                                                                                                                                                           |
|----------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| transaction_split    | String | <b>Definition</b><br>Status of transaction splitting for the database proxy.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>true</b>: enabled</li> <li>• <b>false</b>: disabled</li> </ul>                               |
| connection_pool_type | String | <b>Definition</b><br>Connection pool type.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>CLOSED</b>: The connection pool is closed.</li> <li>• <b>SESSION</b>: The session-level connection pool is enabled.</li> </ul> |
| pay_mode             | String | <b>Definition</b><br>Billing mode of the database proxy.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>0</b>: pay-per-use billing</li> <li>• <b>1</b>: yearly/monthly billing</li> </ul>                                |
| name                 | String | <b>Definition</b><br>Name of the database proxy.<br><b>Range</b><br>N/A                                                                                                                                                               |
| proxy_mode           | String | <b>Definition</b><br>Read/write mode of the database proxy.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>readwrite</b>: readable and writable</li> <li>• <b>readonly</b>: read-only</li> </ul>                         |
| dns_name             | String | <b>Definition</b><br>Private domain name for the read/write splitting address of the database proxy.<br><b>Range</b><br>If this parameter is left blank, no private domain name has been requested.                                   |
| subnet_id            | String | <b>Definition</b><br>ID of the subnet to which the database proxy belongs.<br><b>Range</b><br>N/A                                                                                                                                     |

| Parameter                        | Type    | Description                                                                                                                                                                                                                                                                                           |
|----------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| seconds_level_monitor_fun_status | String  | <b>Definition</b><br>Status of Monitoring by Seconds of the database proxy.<br><b>Range</b> <ul style="list-style-type: none"> <li>off</li> <li>on</li> </ul>                                                                                                                                         |
| alt_flag                         | Boolean | <b>Definition</b><br>ALT switch status.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                        |
| force_read_only                  | Boolean | <b>Definition</b><br>Whether to forcibly route read requests to read replicas.<br><b>Range</b><br>N/A                                                                                                                                                                                                 |
| route_mode                       | Integer | <b>Definition</b><br>Routing policy of the database proxy.<br><b>Range</b> <ul style="list-style-type: none"> <li>0: weighted</li> <li>1: load balancing (The primary instance does not process read requests.)</li> <li>2: load balancing (The primary instance processes read requests.)</li> </ul> |
| ssl_option                       | Boolean | <b>Definition</b><br>SSL switch status.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                        |
| support_balance_route_mode       | Boolean | <b>Definition</b><br>Whether load balancing can be enabled for the database proxy.<br><b>Range</b><br>N/A                                                                                                                                                                                             |
| support_proxy_ssl                | Boolean | <b>Definition</b><br>Whether SSL can be enabled for the database proxy.<br><b>Range</b><br>N/A                                                                                                                                                                                                        |



| Parameter                           | Type    | Description                                                                                                                 |
|-------------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------|
| support_switch_connection_pool_type | Boolean | <b>Definition</b><br>Whether the session connection pool type can be changed for the database proxy.<br><b>Range</b><br>N/A |
| support_transaction_split           | Boolean | <b>Definition</b><br>Whether transaction splitting can be enabled for the database proxy.<br><b>Range</b><br>N/A            |

**Table 5-395** nodes field data structure description

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                          |
|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | <b>Definition</b><br>ID of the database proxy node.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                           |
| status    | String | <b>Definition</b><br>Status of the database proxy node.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>NORMAL</b>: The node is normal.</li> <li>• <b>ABNORMAL</b>: The node is abnormal.</li> <li>• <b>CREATING</b>: The node is being created.</li> <li>• <b>CREATEFAIL</b>: The node failed to be created.</li> </ul> |
| role      | String | <b>Definition</b><br>Role of the database proxy node.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>master</b>: primary node</li> <li>• <b>slave</b>: standby node</li> </ul>                                                                                                                                          |
| az_code   | String | <b>Definition</b><br>AZ where the database proxy node is located.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                             |

| Parameter   | Type    | Description                                                                                                                                                      |
|-------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| frozen_flag | Integer | <b>Definition</b><br>Whether the database proxy node is frozen.<br><b>Range</b> <ul style="list-style-type: none"> <li>0: unfrozen</li> <li>1: frozen</li> </ul> |

**Table 5-396** flavor\_info field data structure description

| Parameter  | Type   | Description                                                                                                               |
|------------|--------|---------------------------------------------------------------------------------------------------------------------------|
| group_type | String | <b>Definition</b><br>CPU architecture.<br><b>Range</b> <ul style="list-style-type: none"> <li>X86</li> <li>ARM</li> </ul> |
| code       | String | <b>Definition</b><br>Specification code.<br><b>Range</b><br>N/A                                                           |

**Table 5-397** readonly\_instances field data structure description

| Parameter | Type   | Description                                                                             |
|-----------|--------|-----------------------------------------------------------------------------------------|
| id        | String | <b>Definition</b><br>ID of the primary instance or read replica.<br><b>Range</b><br>N/A |
| status    | String | <b>Definition</b><br>Node status.<br><b>Range</b><br>N/A                                |
| name      | String | <b>Definition</b><br>Instance name.<br><b>Range</b><br>N/A                              |

| Parameter       | Type             | Description                                                                            |
|-----------------|------------------|----------------------------------------------------------------------------------------|
| weight          | Integer          | <b>Definition</b><br>Read weight of the instance.<br><b>Range</b><br>N/A               |
| available_zones | Array of objects | <b>Definition</b><br>AZ information.<br>For details, see <a href="#">Table 5-398</a> . |

**Table 5-398** available\_zones field data structure description

| Parameter   | Type   | Description                                                 |
|-------------|--------|-------------------------------------------------------------|
| code        | String | <b>Definition</b><br>AZ code.<br><b>Range</b><br>N/A        |
| description | String | <b>Definition</b><br>AZ description.<br><b>Range</b><br>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       | <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                                                                                             |

**Table 5-400** Request parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                       |
|-----------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset    | No        | Integer | <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/>The default value is <b>0</b>, indicating that the query starts from the first data record.</p> |
| limit     | No        | Integer | <p><b>Definition</b><br/>Number of records to be queried.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>1–100</p> <p><b>Default Value</b><br/>100</p>                                                                                                                                                                                 |

## 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 | <b>Definition</b><br>Specification group information.<br>For details, see <a href="#">Table 5-402</a> . |

**Table 5-402** compute\_flavor\_groups element structure description

| Parameter       | Type             | Description                                                                                                                        |
|-----------------|------------------|------------------------------------------------------------------------------------------------------------------------------------|
| group_type      | String           | <b>Definition</b><br>Specification group type.<br><b>Range</b> <ul style="list-style-type: none"><li>• X86</li><li>• ARM</li></ul> |
| compute_flavors | Array of objects | <b>Definition</b><br>Specification information.<br>For details, see <a href="#">Table 5-403</a> .                                  |

**Table 5-403** compute\_flavors element structure description

| Parameter | Type   | Description                                                                                                  |
|-----------|--------|--------------------------------------------------------------------------------------------------------------|
| id        | String | <b>Definition</b><br>Specification ID of the database proxy.<br><b>Range</b><br>N/A                          |
| code      | String | <b>Definition</b><br>Specification code of the database proxy.<br><b>Range</b><br>N/A                        |
| cpu       | String | <b>Definition</b><br>Number of vCPUs.<br><b>Range</b><br>For example, the value <b>1</b> indicates one vCPU. |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| mem       | String | <b>Definition</b><br>Memory size in GB.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                                                                        |
| db_type   | String | <b>Definition</b><br>Database type.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                                                                            |
| az_status | Object | <b>Definition</b><br>AZ information. <b>key</b> indicates the AZ associated with the specification, and <b>value</b> indicates the specification status in the AZ. Only the specification status in the AZ where the primary instance is located is displayed.<br><b>Range</b> <ul style="list-style-type: none"> <li><b>normal</b>: The specification is normal.</li> <li><b>abandon</b>: The specification is abandoned.</li> </ul> |

- 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       | <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                                                                                             |

| Parameter | Mandatory | Description                                                                                                                |
|-----------|-----------|----------------------------------------------------------------------------------------------------------------------------|
| proxy_id  | Yes       | <b>Definition</b><br>Database proxy 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 5-405** Parameters

| Parameter          | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------|-----------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| master_weight      | Yes       | Integer          | <b>Definition</b><br>Read weight of the primary instance.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li>When <b>route_mode</b> is set to <b>0</b>, the value of this parameter ranges from 0 to 1000.</li> <li>When <b>route_mode</b> is set to a value other than 0, this parameter does not take effect.</li> </ul> <b>Default Value</b><br>N/A |
| readonly_instances | Yes       | Array of objects | <b>Definition</b><br>Read weights of database nodes. For details, see <a href="#">Table 5-406</a> .<br><b>Constraints</b> <ul style="list-style-type: none"> <li>You can only configure weights for read replicas.</li> <li>This parameter can be left blank.</li> </ul>                                                                                                                |

| Parameter  | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                |
|------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| route_mode | Yes       | Integer | <b>Definition</b><br>Routing policy of the database proxy.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"><li>0: weighted</li><li>1: load balancing (The primary instance does not process read requests.)</li><li>2: load balancing (The primary instance processes read requests.)</li></ul> <b>Default Value</b><br>N/A |

Table 5-406 readonly\_instances 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          |
| weight      | Yes       | Integer | <b>Definition</b><br>Read weight assigned.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Result of changing the routing policy of the database proxy.<br><b>Range</b> <ul style="list-style-type: none"><li>• failed</li><li>• success</li></ul> |

- 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       | <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                                                                                             |
| proxy_id    | Yes       | <b>Definition</b><br>Database proxy ID.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Task ID.<br><b>Range</b><br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

## Request

**Table 5-411** Parameters

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name          | Yes       | String | <p>Specifies the database name.</p> <p>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 (\$).</p>                                                                                                                                                                                                                          |
| character_set | Yes       | String | <p>Specifies the character set used by the database, such as utf8, gbk, and ascii.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| comment       | No        | String | <p>Specifies the database remarks.</p> <p>The value can contain 0 to 512 characters.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"><li>• To use this function, contact customer service to apply for the required permissions.</li><li>• 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 <a href="#">Upgrading a Minor Version</a>.</li></ul> |

## 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 <b>successful</b> 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

## Request

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

## Response

- Normal response

**Table 5-414** Parameters

| Parameter | Type             | Description                                                                                      |
|-----------|------------------|--------------------------------------------------------------------------------------------------|
| databases | Array of objects | Each element in the list indicates a database.<br>For details, see <a href="#">Table 5-415</a> . |

**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.<br><br>For details, see <a href="#">Table 5-416</a> . |

**Table 5-416** users element structure description

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

- 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>For details, see <a href="#">Table 5-419</a> . |
| 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.<br><b>NOTE</b><br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |

| 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 <b>1</b> .                                           |
| 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.<br>For details, see <a href="#">Table 5-422</a> . |
| 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 | <p>Indicates the read-only permission.</p> <ul style="list-style-type: none"> <li><b>true:</b> indicates the database is read-only.</li> <li><b>false:</b> indicates the database is readable and writable.</li> </ul> |

- 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<br>y | 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 5-424** Parameter description

| Parameter | Mandator<br>y | Type   | Description                                                                   |
|-----------|---------------|--------|-------------------------------------------------------------------------------|
| name      | Yes           | String | Specifies the database name.                                                  |
| comment   | No            | String | Specifies the database remarks.<br>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 <b>successful</b> 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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 <b>successful</b> 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

## Request

**Table 5-429** Parameters

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

| Parameter | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| comment   | No        | String           | Specifies remarks of the database account.<br>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. <ul style="list-style-type: none"> <li>If the IP address is set to %, all IP addresses are allowed to access your instance.</li> <li>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.</li> <li>Multiple IP addresses can be added.</li> </ul> |
| databases | No        | Array of objects | Databases that you can log in using the account. For details, see <a href="#">Table 5-430</a> .                                                                                                                                                                                                                                                                               |

**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. <ul style="list-style-type: none"> <li><b>true</b>: indicates the database is read-only.</li> <li><b>false</b>: indicates the database is readable and writable.</li> </ul> |

## 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 <b>successful</b> 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>For details, see <a href="#">Table 5-434</a> . |

**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.<br>For details, see <a href="#">Table 5-435</a> . |

**Table 5-435** databases element structure description

| Parameter | Type    | Description                                                                                                                                                                                               |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | String  | Indicates a database name.                                                                                                                                                                                |
| readonly  | Boolean | Indicates the read-only permission.<br><ul style="list-style-type: none"> <li><b>true</b>: indicates the read-only permission.</li> <li><b>false</b>: indicates the read and write permission.</li> </ul> |

- 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |

| 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.<br>For details, see <a href="#">Table 5-438</a> . |
| 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.<br>For details, see <a href="#">Table 5-439</a> . |
| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>For details, see <a href="#">Table 5-442</a> . |
| 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.<br><ul style="list-style-type: none"> <li>• <b>true</b>: read-only</li> <li>• <b>false</b>: read/write</li> </ul> |

- 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>Value range: 1 to 512 characters. |

## Example Request

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

```
PUT https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsf23fsfsae3435in01/db-users/root/comment
{
 "comment": "this is a comment"
}
```

## Response

- Normal response

**Table 5-445** Parameters

| Parameter | Type   | Description                                              |
|-----------|--------|----------------------------------------------------------|
| resp      | String | Returns <b>successful</b> 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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 <b>successful</b> 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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 | <p>Specifies the password of the database account.</p> <p>Valid value:</p> <p>The value must be 8 to 32 characters long and contain at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters (~!@#\$\$%^*_-=+?,()&amp;). The value must be different from the account name or account name spelled backwards.</p> <p>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.</p> |

## Example Request

Set a password for user **rds**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdae3435in01/db_user/resetpwd
{
 "name": "rds",
 "password": "*****"
}
```

## Response

- Normal response

**Table 5-450** Parameters

| Parameter | Type   | Description                                              |
|-----------|--------|----------------------------------------------------------|
| resp      | String | Returns <b>successful</b> 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>For details on the element structure, see <a href="#">Table 5-453</a> . |

**Table 5-453** users field data structure description

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

## 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 <b>successful</b> 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>Each element is a database account. A single request supports a maximum of 50 elements.<br><br>For more information about the element structure, see <a href="#">Table 5-457</a> . |

Table 5-457 users field data structure description

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

Example Request

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

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

Response

- Normal response

Table 5-458 Parameters

| Parameter | Type   | Description                                              |
|-----------|--------|----------------------------------------------------------|
| resp      | String | Returns <b>successful</b> 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                            |

## Request

**Table 5-460** Parameters

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_user_pwd | Yes       | String | <p>Specifies the database password.</p> <p>Valid value:</p> <p>RDS for MySQL:</p> <p>The value must be 8 to 32 characters long and contain at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters (~!@#%&amp;^*-_ = +?,()&amp;).</p> <p>RDS for PostgreSQL:</p> <p>The value must be 8 to 32 characters long and contain at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters (~!@#%&amp;^*-_ = +?,(,)).</p> <p>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.</p> |

## Example Request

Reset the password for user **root**.

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

## Request

**Table 5-462** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | String | <p><b>Definition</b><br/>Specifies the database name.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The database name can contain 1 to 63 characters. Only letters, digits, and underscores (_) are allowed. It cannot start with <b>pg</b> or a digit and cannot be the same as RDS for PostgreSQL template database names.</p> <p>RDS for PostgreSQL template databases include <b>postgres</b>, <b>template0</b>, and <b>template1</b>.</p> <p><b>Default Value</b><br/>N/A</p> |
| owner     | No        | String | <p><b>Definition</b><br/>Specifies the database owner.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>It must be an existing user not named after any system user.</p> <p>System users include <b>rdsAdmin</b>, <b>rdsMetric</b>, <b>rdsBackup</b>, <b>rdsRepl</b>, <b>rdsProxy</b>, and <b>rdsDdm</b>.</p> <p><b>Default Value</b><br/>root</p>                                                                                                                                    |



| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                          |
|---------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| template      | No        | String | <p><b>Definition</b><br/>Specifies the name of the database template.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value can be <b>template0</b> or <b>template1</b>.</p> <p><b>Default Value</b><br/>template1</p> |
| character_set | No        | String | <p><b>Definition</b><br/>Specifies the database character set.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>UTF8</p>                                                                |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| lc_collate | No        | String | <p><b>Definition</b><br/>Specifies the database collation.</p> <p><b>Constraints</b><br/>Comparison of the same string in different collations may have different results.</p> <p>For example, the execution result of <b>select 'a'&gt;'A'</b>; is <b>false</b> when this parameter is set to <b>en_US.utf8</b> and is <b>true</b> when this parameter is set to <b>'C'</b>. If a database is migrated from Oracle to PostgreSQL, this parameter needs to be set to <b>'C'</b> to meet your expectations.</p> <p>Collations supported by a database can be queried from system catalog <b>pg_collation</b>.</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>en_US.UTF-8</p> |
| lc_ctype   | No        | String | <p><b>Definition</b><br/>Specifies the character classification.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>en_US.UTF-8</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter                  | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_revoke_public_privilege | No        | Boolean | <p><b>Definition</b><br/>Specifies whether to revoke the <b>PUBLIC CREATE</b> permission of the public schema.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true</b>: indicates that the permission will be revoked.</li> <li>• <b>false</b>: indicates that the permission will not be revoked.</li> </ul> <p><b>Default Value</b><br/>If this parameter is not specified, the default value is <b>false</b>.</p> |

## 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 | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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       | <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 5-465** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | String | <p><b>Definition</b><br/>Specifies the username of the database account.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The username contains 1 to 63 characters, including letters, digits, and underscores (_). It cannot start with <b>pg</b> or a digit and must be different from system usernames. System users include <b>rdsAdmin</b>, <b>rdsMetric</b>, <b>rdsBackup</b>, <b>rdsRepl</b>, <b>rdsProxy</b>, and <b>rdsDdm</b>.</p> <p><b>Default Value</b><br/>N/A</p>                                                                                  |
| password  | Yes       | String | <p><b>Definition</b><br/>Specifies the password of the database account.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>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.</p> <p><b>Default Value</b><br/>N/A</p> |

## Example Request

Creating a database account named **rds**

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/db_user

{
 "name": "rds",
 "password": "*****"
}
```

## Response

- Normal response

**Table 5-466** Parameters

| Parameter | Type   | Description                                                                                                     |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| resp      | String | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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<br>y | 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 5-468** Parameters

| Parameter | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_name   | Yes       | String           | <p><b>Definition</b><br/>Specifies the database name.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The database name can contain 1 to 63 characters. Only letters, digits, and underscores (_) are allowed. It cannot start with <b>pg</b> or a digit and cannot be the same as RDS for PostgreSQL template database names.</p> <p>RDS for PostgreSQL template databases include postgres, template0, and template1.</p> <p><b>Default Value</b><br/>N/A</p> |
| schemas   | Yes       | Array of objects | <p><b>Definition</b><br/>Each element is the schema information associated with the database. A single request supports a maximum of 20 elements.</p> <p>For details on the element structure, see <a href="#">Table 5-469</a>.</p> <p><b>Constraints</b><br/>N/A</p>                                                                                                                                                                                                     |

Table 5-469 schemas field data structure description

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| schema_name | Yes       | String | <p><b>Definition</b><br/>Specifies the schema name.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value contains 1 to 63 characters, including letters, digits, and underscores (_). It cannot start with <b>pg</b> or a digit, and must be different from RDS for PostgreSQL template database names and existing schema names.</p> <p>RDS for PostgreSQL template databases include postgres, template0, and template1.</p> <p>Existing schemas include public and information_schema.</p> <p><b>Default Value</b><br/>N/A</p> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| owner     | Yes       | String | <p><b>Definition</b><br/>Specifies the database owner.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value contains 1 to 63 characters. It cannot start with <b>pg</b> or a digit, and must be different from system usernames.</p> <p>System users include <b>rdsAdmin</b>, <b>rdsMetric</b>, <b>rdsBackup</b>, <b>rdsRepl</b>, <b>rdsProxy</b>, and <b>rdsDdm</b>.</p> <p><b>Default Value</b><br/>N/A</p> |

## Example Request

Create a database schema.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/schema

{
 "db_name": "rds_test",
 "schemas": [
 {
 "schema_name": "teste123",
 "owner": "teste123"
 }
]
}
```

## Response

- Normal response

Table 5-470 Parameters

| Parameter | Type   | Description                                                                                                     |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| resp      | String | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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       | <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 5-472** Parameters

| Parameter | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_name   | Yes       | String           | <p><b>Definition</b><br/>Database name.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The database name can contain 1 to 63 characters. Only letters, digits, and underscores (_) are allowed. It cannot start with <b>pg</b> or a digit and cannot be the same as RDS for PostgreSQL template database names.</p> <p>RDS for PostgreSQL template databases include postgres, template0, and template1.</p> <p><b>Default Value</b><br/>N/A</p> |
| users     | Yes       | Array of objects | <p><b>Definition</b><br/>Database accounts. Each element is a database account. A single request supports a maximum of 50 elements.</p> <p>For details on the element structure, see <a href="#">Table 5-473</a>.</p> <p><b>Constraints</b><br/>N/A</p>                                                                                                                                                                                                     |

**Table 5-473** users field data structure description

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | String  | <p><b>Definition</b><br/>Specifies the username of the database account.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The database account name contains 1 to 63 characters, including letters, digits, and underscores (_). It cannot start with <b>pg</b> or a digit and must be different from system user names.</p> <p>System users include <b>rdsAdmin</b>, <b>rdsMetric</b>, <b>rdsBackup</b>, <b>rdsRepl</b>, <b>rdsProxy</b>, and <b>rdsDdm</b>.</p> <p><b>Default Value</b><br/>N/A</p> |
| readonly  | Yes       | Boolean | <p><b>Definition</b><br/>Specifies the database account permissions.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true</b>: read-only</li> <li>• <b>false</b>: read and write</li> </ul> <p><b>Default Value</b><br/>N/A</p>                                                                                                                                                                                                                          |

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| schema_name | Yes       | String | <p><b>Definition</b><br/>Specifies the schema name.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value cannot be empty and contains 1 to 63 characters, including letters, digits, and underscores (_). It cannot start with <b>pg</b> or a digit, and must be different from RDS for PostgreSQL template database names and existing schema names. This parameter is mandatory.</p> <p>RDS for PostgreSQL template databases include postgres, template0, and template1.</p> <p><b>Default Value</b><br/>N/A</p> |

## 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 | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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       | <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 5-476 Parameters

| Parameter | Mandator<br>y | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|---------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes           | String | <b>Definition</b><br>Specifies the username of the database account.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                    |
| password  | Yes           | String | <b>Definition</b><br>Specifies the password of the database account.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>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.<br>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.<br><b>Default Value</b><br>N/A |

Example Request

Reset the password of **rds**.

```
POST https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/
f569f1358436479dbcba8603c32cc4aein03/db_user/resetpwd

{
 "name": "rds",
 "password": "1!*****1"
}
```

## Response

- Normal response

**Table 5-477** Parameters

| Parameter | Type   | Description                                                                                                     |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| resp      | String | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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       | <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          | No        | <p><b>Definition</b><br/>Database name, which is case-insensitive for fuzzy search.</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>                                               |
| page        | Yes       | <p><b>Definition</b><br/>Page number.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value starts from 1.</p> <p><b>Default Value</b><br/>N/A</p>                                                                        |

| Parameter | Mandatory | Description                                                                                                                                  |
|-----------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------|
| limit     | Yes       | <b>Definition</b><br>Number of records on each page.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>[1, 100]<br><b>Default Value</b><br>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 | <b>Definition</b><br>Each element in the list indicates a database.<br>For details, see <a href="#">Table 5-480</a> . |
| total_count | Integer          | <b>Definition</b><br>Indicates the total number of databases.<br><b>Range</b><br>N/A                                  |

**Table 5-480** databases element structure description

| Parameter     | Type    | Description                                                                                                         |
|---------------|---------|---------------------------------------------------------------------------------------------------------------------|
| name          | String  | <b>Definition</b><br>Indicates the database name.<br><b>Range</b><br>N/A                                            |
| owner         | String  | <b>Definition</b><br>Indicates the database owner.<br><b>Range</b><br>N/A                                           |
| character_set | String  | <b>Definition</b><br>Indicates the character set used by the database, such as <b>UTF8</b> .<br><b>Range</b><br>N/A |
| collate_set   | String  | <b>Definition</b><br>Indicates the database collation, such as <b>en_US.UTF-8</b> .<br><b>Range</b><br>N/A          |
| size          | Integer | <b>Definition</b><br>Indicates the database size, in bytes.<br><b>Range</b><br>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<br>y | 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                                                                                             |
| page        | Yes           | <b>Definition</b><br>Page number.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value starts from 1.<br><b>Default Value</b><br>N/A                                                                        |

| Parameter | Mandatory | Description                                                                                                                                  |
|-----------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------|
| limit     | Yes       | <b>Definition</b><br>Number of records on each page.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>[1, 100]<br><b>Default Value</b><br>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 | <b>Definition</b><br>Each element in the list indicates a database account.<br>For details, see <a href="#">Table 5-483</a> . |
| total_count | Integer          | <b>Definition</b><br>Indicates the total number of database users.<br><b>Range</b><br>N/A                                     |

**Table 5-483** users element structure description

| Parameter  | Type             | Description                                                                                                       |
|------------|------------------|-------------------------------------------------------------------------------------------------------------------|
| name       | String           | <b>Definition</b><br>Indicates the account name.<br><b>Range</b><br>N/A                                           |
| attributes | Object           | <b>Definition</b><br>Indicates permission attributes of a user.<br>For details, see <a href="#">Table 5-484</a> . |
| memberof   | Array of strings | <b>Definition</b><br>Indicates default rights of a user.<br><b>Range</b><br>N/A                                   |

**Table 5-484** attributes element structure description

| Parameter | Type    | Description                                                                                                                                           |
|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| rolsuper  | Boolean | <b>Definition</b><br>Whether a user has the super user permission.<br><b>Range</b><br><b>false:</b> The user does not have the super user permission. |

| Parameter     | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rolinherit    | Boolean | <p><b>Definition</b><br/>Whether a user automatically inherits permissions of the role that the user belongs to.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> The user automatically inherits the permissions of the role that the user belongs to.</li> <li>• <b>false:</b> The user does not automatically inherit the permissions of the role that the user belongs to.</li> </ul> |
| rolcreaterole | Boolean | <p><b>Definition</b><br/>Whether a user can create other sub-users.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> The user can create other sub-users.</li> <li>• <b>false:</b> The user cannot create other sub-users.</li> </ul>                                                                                                                                                     |
| rolcreatedb   | Boolean | <p><b>Definition</b><br/>Whether a user can create databases.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> The user can create databases.</li> <li>• <b>false:</b> The user cannot create databases.</li> </ul>                                                                                                                                                                       |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                     |
|----------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rolcanlogin    | Boolean | <p><b>Definition</b></p> <p>Whether a user has the permissions to log in to a database.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> The user has the permissions to log in to a database.</li> <li>• <b>false:</b> The user does not have the permissions to log in to a database.</li> </ul> |
| rolconlimit    | Integer | <p><b>Definition</b></p> <p>Maximum number of concurrent connections to an instance. The value <b>-1</b> indicates that there are no limitations on the number of concurrent connections.</p> <p><b>Range</b></p> <p>N/A</p>                                                                                                    |
| rolreplication | Boolean | <p><b>Definition</b></p> <p>Whether a user is a replication role.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> The user is a replication role.</li> <li>• <b>false:</b> The user is not a replication role.</li> </ul>                                                                         |
| rolbypassrls   | Boolean | <p><b>Definition</b></p> <p>Whether a user bypasses each row-level security policy.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> The user bypasses each row-level security policy.</li> <li>• <b>false:</b> The user does not bypass each row-level security policy.</li> </ul>                |

- 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<br>y | 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                                                                                                                                                                                    |
| db_name     | Yes           | <b>Definition</b><br>Specifies the database name.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>Database names must be different from RDS for PostgreSQL template database names.<br>RDS for PostgreSQL template databases include postgres, template0, and template1.<br><b>Default Value</b><br>N/A |

| Parameter | Mandatory | Description                                                                                                                                  |
|-----------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------|
| page      | Yes       | <b>Definition</b><br>Page number.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value starts from 1.<br><b>Default Value</b><br>N/A    |
| limit     | Yes       | <b>Definition</b><br>Number of records on each page.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>[1, 100]<br><b>Default Value</b><br>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 | <b>Definition</b><br>Each element in the list indicates a database schema.<br>For details, see <a href="#">Table 5-487</a> . |



| Parameter   | Type    | Description                                                                                 |
|-------------|---------|---------------------------------------------------------------------------------------------|
| total_count | Integer | <b>Definition</b><br>Indicates the total number of database schemas.<br><b>Range</b><br>N/A |

**Table 5-487** users element structure description

| Name        | Type   | Description                                                           |
|-------------|--------|-----------------------------------------------------------------------|
| schema_name | String | <b>Definition</b><br>Indicates a schema name.<br><b>Range</b><br>N/A  |
| owner       | String | <b>Definition</b><br>Indicates a schema owner.<br><b>Range</b><br>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       | <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 5-489** Parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| all_users | Yes       | Boolean | <p><b>Definition</b><br/>Whether to configure permissions for all database accounts.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true</b>: Configure permissions for all database accounts. The <b>user_name</b> parameter is ignored.</li> <li>• <b>false</b>: Configure permissions only for the account specified by <b>user_name</b>.</li> </ul> <p><b>Default Value</b><br/>N/A</p>                              |
| user_name | No        | String  | <p><b>Definition</b><br/>Username of the database account.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The username contains 1 to 63 characters, including letters, digits, and underscores (_). It cannot start with <b>pg</b> or a digit and must be different from system usernames. System usernames include <b>rdsAdmin</b>, <b>rdsMetric</b>, <b>rdsBackup</b>, <b>rdsRepl</b>, <b>rdsProxy</b>, and <b>rdsDdm</b>.</p> <p><b>Default Value</b><br/>N/A</p> |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                      |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| readonly  | Yes       | Boolean | <b>Definition</b><br>Whether the permission is read-only.<br><b>Constraints</b><br>N/A<br><b>Range</b><br><ul style="list-style-type: none"> <li><b>true</b>: read-only</li> <li><b>false</b>: read/write</li> </ul> <b>Default Value</b><br>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       | <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 5-491** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                               |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| owner     | Yes       | String | <b>Definition</b><br>New username.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The username must be different from the name of the built-in user.<br><b>Default Value</b><br>N/A                      |
| database  | Yes       | String | <b>Definition</b><br>Database name.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The database name cannot be <b>template0</b> , <b>template1</b> , or <b>postgres</b> .<br><b>Default Value</b><br>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 | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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<br>y | 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 5-494** Parameters

| Parameter | Mandatory | Type             | Description                                                                                                                                                                           |
|-----------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| user      | Yes       | String           | <b>Definition</b><br>Username.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The username must be different from the name of the built-in user.<br><b>Default Value</b><br>N/A      |
| roles     | Yes       | Array of strings | <b>Definition</b><br>Role name.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The role name must be different from the names of built-in user roles.<br><b>Default Value</b><br>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 | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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       | <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 5-497** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                    |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| user      | Yes       | String | <b>Definition</b><br>Username.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The username must be different from the names of built-in users.<br><b>Default Value</b><br>N/A |

| Parameter | Mandatory | Type             | Description                                                                                                                                                                           |
|-----------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| roles     | Yes       | Array of strings | <b>Definition</b><br>Role name.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The role name must be different from the names of built-in user roles.<br><b>Default Value</b><br>N/A |

## Example Request

Revoke roles **user3** and **user4** from the user **user1**.

```
DELETE https://rds.ap-southeast-1.myhuaweicloud.com/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfdae3435in03/db-user-role

{
 "user": "user1",
 "roles": ["user3", "user4"]
}
```

## Response

- Normal response

**Table 5-498** Parameters

| Parameter | Type   | Description                                                                                                     |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| resp      | String | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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  | Mandator<br>y | 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 |

**Table 5-500** Query parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                 |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| user_name | No        | String | <b>Definition</b><br>Username.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>If this parameter is specified, the set of roles that can be granted to the user is returned.<br><b>Default Value</b><br>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 | <b>Definition</b><br>Role information.<br><b>Range</b><br>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       | <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

- 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 | <b>Definition</b><br>Parameter list.<br>For details, see <a href="#">Table 5-504</a> . |



**Table 5-504** Parameters

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                           |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String | <p><b>Definition</b><br/>Connection type.</p> <p><b>Range</b><br/>Enumerated values: <b>host</b>, <b>hostssl</b>, and <b>hostnossl</b></p>                                                                                                                                                                                            |
| database  | String | <p><b>Definition</b><br/>Database name.</p> <p><b>Range</b><br/>The value can be any name other than <b>template0</b> and <b>template1</b>. Use commas (,) to separate multiple names.</p>                                                                                                                                            |
| user      | String | <p><b>Definition</b><br/>Name of a user other than <b>rdsAdmin</b>, <b>rdsMetric</b>, <b>rdsBackup</b>, <b>rdsRepl</b>, and <b>rdsProxy</b>.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>all</b> indicates all database users of the DB instance.</li> <li>• Use commas (,) to separate usernames.</li> </ul> |
| address   | String | <p><b>Definition</b><br/>Client IP address. <b>0.0.0.0/0</b> indicates that the user can access the database from any IP address.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                     |
| mask      | String | <p><b>Definition</b><br/>Subnet mask.</p> <p><b>Range</b><br/>The value is an empty character string by default.</p>                                                                                                                                                                                                                  |
| method    | String | <p><b>Definition</b><br/>Authentication mode.</p> <p><b>Range</b><br/>Enumerated values: <b>reject</b>, <b>md5</b>, and <b>scram-sha-256</b></p>                                                                                                                                                                                      |

| Parameter | Type    | Description                                                         |
|-----------|---------|---------------------------------------------------------------------|
| priority  | Integer | <b>Definition</b><br>Configuration priority.<br><b>Range</b><br>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       | <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 5-506** Request parameters

| Parameter      | Mandatory | Type             | Description                                                                                                                    |
|----------------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Array elements | No        | Array of objects | <b>Definition</b><br>Parameters to be modified.<br>For details, see <a href="#">Table 5-507</a> .<br><b>Constraints</b><br>N/A |

**Table 5-507** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | <b>Definition</b><br>Connection type.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>Enumerated values: <b>host</b> , <b>hostssl</b> , and <b>hostnoss</b><br><b>Default Value</b><br>N/A                                                                                                                                                                                                    |
| database  | Yes       | String | <b>Definition</b><br>Database name.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value can be any name other than <b>template0</b> and <b>template1</b> . Use commas (,) to separate multiple names.<br><b>Default Value</b><br>N/A                                                                                                                                                    |
| user      | Yes       | String | <b>Definition</b><br>Name of a user other than <b>rdsAdmin</b> , <b>rdsMetric</b> , <b>rdsBackup</b> , <b>rdsRepl</b> , and <b>rdsProxy</b> .<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li><b>all</b> indicates all database users of the DB instance.</li> <li>Use commas (,) to separate multiple user names.</li> </ul> <b>Default Value</b><br>N/A |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                      |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| address   | Yes       | String | <b>Definition</b><br>Client IP address. <b>0.0.0.0/0</b> indicates that the user can access the database from any IP address.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| mask      | No        | String | <b>Definition</b><br>Subnet mask.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>An empty string                                                                                 |
| method    | Yes       | String | <b>Definition</b><br>Authentication mode.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>Enumerated values: <b>reject</b> , <b>md5</b> , and <b>scram-sha-256</b><br><b>Default Value</b><br>N/A                |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| priority  | Yes       | Integer | <b>Definition</b><br>Configuration priority.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The priority you specified determines whether to modify or add a record in the <b>pg_hba.conf</b> file. <ul style="list-style-type: none"><li>• If the priority you specified does not exist, a new record will be added to the <b>pg_hba.conf</b> file.</li><li>• If the priority you specified already exists, the record will be modified in the <b>pg_hba.conf</b> file.</li></ul> <b>Default Value</b><br>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 | <b>Definition</b><br>Result code.<br><b>Range</b><br>N/A |

| Parameter | Type   | Description                                                     |
|-----------|--------|-----------------------------------------------------------------|
| message   | String | <b>Definition</b><br>Result description.<br><b>Range</b><br>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       | <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 5-510** Request parameters

| Parameter      | Mandatory | Type             | Description                                                                                                                    |
|----------------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Array elements | No        | Array of objects | <b>Definition</b><br>Parameters to be modified.<br>For details, see <a href="#">Table 5-511</a> .<br><b>Constraints</b><br>N/A |



**Table 5-511** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | <b>Definition</b><br>Connection type.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>Enumerated values: <b>host</b> , <b>hostssl</b> , and <b>hostnoss</b><br><b>Default Value</b><br>N/A                                                                                                                                                                                                   |
| database  | Yes       | String | <b>Definition</b><br>Database name.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value can be any name other than <b>template0</b> and <b>template1</b> . Use commas (,) to separate multiple names.<br><b>Default Value</b><br>N/A                                                                                                                                                   |
| user      | Yes       | String | <b>Definition</b><br>Name of a user other than <b>rdsAdmin</b> , <b>rdsMetric</b> , <b>rdsBackup</b> , <b>rdsRepl</b> , and <b>rdsProxy</b> .<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li><b>all</b> indicates all database users of the DB instance.</li> <li>Use commas (,) to separate multiple usernames.</li> </ul> <b>Default Value</b><br>N/A |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                      |
|-----------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| address   | Yes       | String  | <b>Definition</b><br>Client IP address. <b>0.0.0.0/0</b> indicates that the user can access the database from any IP address.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| mask      | No        | String  | <b>Definition</b><br>Subnet mask.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>An empty string                                                                                 |
| method    | Yes       | String  | <b>Definition</b><br>Authentication mode.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>Enumerated values: <b>reject</b> , <b>md5</b> , and <b>scram-sha-256</b><br><b>Default Value</b><br>N/A                |
| priority  | Yes       | Integer | <b>Definition</b><br>Configuration priority.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Result code.<br><b>Range</b><br>N/A        |
| message   | String | <b>Definition</b><br>Result description.<br><b>Range</b><br>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       | <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 5-514** Request parameters

| Parameter      | Mandatory | Type             | Description                                                                                                                    |
|----------------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Array elements | No        | Array of objects | <b>Definition</b><br>Parameters to be modified.<br>For details, see <a href="#">Table 5-515</a> .<br><b>Constraints</b><br>N/A |

**Table 5-515** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | <b>Definition</b><br>Connection type.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>Enumerated values: <b>host</b> , <b>hostssl</b> , and <b>hostnssl</b><br><b>Default Value</b><br>N/A                                                 |
| database  | Yes       | String | <b>Definition</b><br>Database name.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value can be any name other than <b>template0</b> and <b>template1</b> . Use commas (,) to separate multiple names.<br><b>Default Value</b><br>N/A |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| user      | Yes       | String | <p><b>Definition</b><br/>Name of a user other than <b>rdsAdmin</b>, <b>rdsMetric</b>, <b>rdsBackup</b>, <b>rdsRepl</b>, and <b>rdsProxy</b>.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>all</b> indicates all database users of the DB instance.</li> <li>• Use commas (,) to separate multiple usernames.</li> </ul> <p><b>Default Value</b><br/>N/A</p> |
| address   | Yes       | String | <p><b>Definition</b><br/>Client IP address. <b>0.0.0.0/0</b> indicates that the user can access the database from any IP address.</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>                                                                                                                                                                              |
| mask      | No        | String | <p><b>Definition</b><br/>Subnet mask.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>An empty string</p>                                                                                                                                                                                                                                                              |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                       |
|-----------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| method    | Yes       | String  | <b>Definition</b><br>Authentication mode.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>Enumerated values: <b>reject</b> , <b>md5</b> , and <b>scram-sha-256</b><br><b>Default Value</b><br>N/A |
| priority  | Yes       | Integer | <b>Definition</b><br>Configuration priority.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Result code.<br><b>Range</b><br>N/A |

| Parameter | Type   | Description                                                     |
|-----------|--------|-----------------------------------------------------------------|
| message   | String | <b>Definition</b><br>Result description.<br><b>Range</b><br>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       | <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                                                                                             |

**Table 5-518** Request parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                      |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_time | No        | String | <b>Definition</b><br>Start time.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>End time.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Parameter list.<br>For details, see <a href="#">Table 5-520</a> . |

**Table 5-520** Parameters

| Parameter    | Type             | Description                                                                                                                                                                                                                                                          |
|--------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status       | String           | <b>Definition</b><br>Change result.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>success</b>: The change has taken effect.</li> <li>• <b>failed</b>: The change did not take effect.</li> <li>• <b>setting</b>: The change is in progress.</li> </ul> |
| time         | String           | <b>Definition</b><br>Time when the change was made.<br><b>Range</b><br>N/A                                                                                                                                                                                           |
| fail_reason  | String           | <b>Definition</b><br>Reason for a change failure.<br><b>Range</b><br>N/A                                                                                                                                                                                             |
| before_confs | Array of objects | <b>Definition</b><br>Original values.<br>For details, see <a href="#">Table 5-521</a> .                                                                                                                                                                              |
| after_confs  | Array of objects | <b>Definition</b><br>New values.<br>For details, see <a href="#">Table 5-522</a> .                                                                                                                                                                                   |

**Table 5-521** before\_confs field description

| Parameter | Type   | Description                                                                                                                     |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------|
| type      | String | <b>Definition</b><br>Connection type.<br><b>Range</b><br>Enumerated values: <b>host</b> , <b>hostssl</b> , and <b>hostnossl</b> |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                    |
|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database  | String  | <p><b>Definition</b><br/>Database name.</p> <p><b>Range</b><br/>The value can be any name other than <b>template0</b> and <b>template1</b>. Use commas (,) to separate multiple names.</p>                                                                                                                                                     |
| user      | String  | <p><b>Definition</b><br/>Name of a user other than <b>rdsAdmin</b>, <b>rdsMetric</b>, <b>rdsBackup</b>, <b>rdsRepl</b>, and <b>rdsProxy</b>.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>all</b> indicates all database users of the DB instance.</li> <li>• Use commas (,) to separate multiple usernames.</li> </ul> |
| address   | String  | <p><b>Definition</b><br/>Client IP address. <b>0.0.0.0/0</b> indicates that the user can access the database from any IP address.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                              |
| mask      | String  | <p><b>Definition</b><br/>Subnet mask.</p> <p><b>Range</b><br/>The value is an empty character string by default.</p>                                                                                                                                                                                                                           |
| method    | String  | <p><b>Definition</b><br/>Authentication mode.</p> <p><b>Range</b><br/>Enumerated values: <b>reject</b>, <b>md5</b>, and <b>scram-sha-256</b></p>                                                                                                                                                                                               |
| priority  | Integer | <p><b>Definition</b><br/>Configuration priority.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                               |

**Table 5-522** after\_confs field description

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                         |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String | <b>Definition</b><br>Connection type.<br><b>Range</b><br>Enumerated values: <b>host</b> , <b>hostssl</b> , and <b>hostnossl</b>                                                                                                                                                                                                     |
| database  | String | <b>Definition</b><br>Database name.<br><b>Range</b><br>The value can be any name other than <b>template0</b> and <b>template1</b> . Use commas (,) to separate multiple names.                                                                                                                                                      |
| user      | String | <b>Definition</b><br>Name of a user other than <b>rdsAdmin</b> , <b>rdsMetric</b> , <b>rdsBackup</b> , <b>rdsRepl</b> , and <b>rdsProxy</b> .<br><b>Range</b> <ul style="list-style-type: none"> <li><b>all</b> indicates all database users of the DB instance.</li> <li>Use commas (,) to separate multiple usernames.</li> </ul> |
| address   | String | <b>Definition</b><br>Client IP address. <b>0.0.0.0/0</b> indicates that the user can access the database from any IP address.<br><b>Range</b><br>N/A                                                                                                                                                                                |
| mask      | String | <b>Definition</b><br>Subnet mask.<br><b>Range</b><br>The value is an empty character string by default.                                                                                                                                                                                                                             |
| method    | String | <b>Definition</b><br>Authentication mode.<br><b>Range</b><br>Enumerated values: <b>reject</b> , <b>md5</b> , and <b>scram-sha-256</b>                                                                                                                                                                                               |

| Parameter | Type    | Description                                                         |
|-----------|---------|---------------------------------------------------------------------|
| priority  | Integer | <b>Definition</b><br>Configuration priority.<br><b>Range</b><br>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       | <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

- Request parameters  
None
- URI example  
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/collations

## Response

- Normal response

**Table 5-524** Parameters

| Parameter | Type         | Description                                                                               |
|-----------|--------------|-------------------------------------------------------------------------------------------|
| charSets  | List<String> | <b>Definition</b><br>Indicates the character set information list.<br><b>Range</b><br>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<br>y | 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 5-526** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | String | <p><b>Definition</b><br/>Specifies the database name.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>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.</p> <p>RDS for SQL Server system databases include master, msdb, model, tempdb, resource, and rdsadmin.</p> <p><b>Default Value</b><br/>N/A</p> |

## 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 | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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       | <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>                                                                                             |
| page        | Yes       | <p><b>Definition</b><br/>Page number.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value is a positive integer starting from 1.</p> <p><b>Default Value</b><br/>N/A</p>                                                |
| limit       | Yes       | <p><b>Definition</b><br/>Specifies the number of records on each page.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value is a positive integer ranging from 1 to 100.</p> <p><b>Default Value</b><br/>N/A</p>         |

| Parameter     | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                   |
|---------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db-name       | No        | <p><b>Definition</b><br/>Specifies the database name.</p> <p><b>Constraints</b><br/>When this parameter is specified, the <b>page</b> and <b>limit</b> parameters need to be specified but do not take effect.</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p>                                                                            |
| recover_model | No        | <p><b>Definition</b><br/>Specifies recovery models of databases.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>FULL</b>: full recovery model</li> <li>• <b>SIMPLE</b>: simple recovery model</li> <li>• <b>BULK_LOGGED</b>: bulk-logged recovery model</li> </ul> <p><b>Default Value</b><br/>N/A</p> |

## 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 | <b>Definition</b><br>Each element in the list indicates a database.<br>For details, see <a href="#">Table 5-530</a> . |
| total_count | Integer          | <b>Definition</b><br>Indicates the total number of databases.<br><b>Range</b><br>N/A                                  |

**Table 5-530** databases element structure description

| Parameter     | Type   | Description                                                                                                                                                                                                                       |
|---------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name          | String | <b>Definition</b><br>Database name.<br><b>Range</b><br>N/A                                                                                                                                                                        |
| character_set | String | <b>Definition</b><br>Character set used by the database.<br><b>Range</b><br>For details about the character sets supported by RDS for SQL Server, see <a href="#">Table 5-524</a> .<br>Example value:<br><b>Chinese_PRC_CI_AS</b> |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                   |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| state     | String | <p><b>Definition</b><br/>Indicates the database status.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>Creating:</b> The database is being created.</li> <li>• <b>Running:</b> The database is running.</li> <li>• <b>Deleting:</b> The database is being deleted.</li> <li>• <b>Not Exists:</b> The database does not exist.</li> </ul> |

- 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<br>y | 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 5-532** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                              |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | String | <b>Definition</b><br>Specifies the username of the database account.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>It consists of 1 to 128 characters and must be different from system usernames.<br>System users include <b>rdsadmin</b> , <b>rdsuser</b> , <b>rdsbackup</b> , and <b>rdsmirror</b> .<br><b>Default Value</b><br>N/A |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| password  | Yes       | String | <p><b>Definition</b><br/>Specifies the password of the database account.</p> <p><b>Constraints</b><br/>You are advised to enter a strong password to improve security and prevent security risks such as brute force cracking.</p> <p><b>Range</b><br/>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.</p> <p><b>Default Value</b><br/>N/A</p> |

## 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 | <p><b>Definition</b><br/>Calling result.</p> <p><b>Range</b><br/>Returns <b>successful</b> if the calling is successful.</p> |

- 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       | <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 5-535** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                               |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | String | <b>Definition</b><br>Username of the database account.<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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| password  | Yes       | String | <p><b>Definition</b><br/>Password of the database account.</p> <p><b>Constraints</b><br/>You are advised to enter a strong password to improve security and prevent security risks such as brute force cracking.</p> <p><b>Range</b><br/>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.</p> <p><b>Default Value</b><br/>N/A</p> |

## 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 | <p><b>Definition</b><br/>Calling result.</p> <p><b>Range</b><br/>Returns <b>successful</b> if the calling is successful.</p> |

- 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       | <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>                                                                                             |
| page        | Yes       | <p><b>Definition</b><br/>Page number.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value is a positive integer starting from 1.</p> <p><b>Default Value</b><br/>N/A</p>                                                |
| limit       | Yes       | <p><b>Definition</b><br/>Specifies the number of records on each page.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value is a positive integer ranging from 1 to 100.</p> <p><b>Default Value</b><br/>N/A</p>         |

## 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 | <b>Definition</b><br>Each element in the list indicates a database account.<br>For details, see <a href="#">Table 5-539</a> . |
| total_count | Integer          | <b>Definition</b><br>Indicates the total number of database users.<br><b>Range</b><br>N/A                                     |

**Table 5-539** users element structure description

| Parameter | Type   | Description                                                             |
|-----------|--------|-------------------------------------------------------------------------|
| name      | String | <b>Definition</b><br>Indicates the account name.<br><b>Range</b><br>N/A |



| Parameter | Type   | Description                                                                                                                                                                                                                                         |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| state     | String | <b>Definition</b><br>Indicates the database user status.<br><br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>unavailable:</b> The database user is unavailable.</li> <li>• <b>available:</b> The database user is available.</li> </ul> |

- 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   | 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                                                                                             |
| db-name     | Yes       | <b>Definition</b><br>Specifies the database name.<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                                                                                                                                                                                |
|-----------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| page      | Yes       | <b>Definition</b><br>Page number.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value is a positive integer starting from 1.<br><b>Default Value</b><br>N/A                          |
| limit     | Yes       | <b>Definition</b><br>Number of records on each page.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value is a positive integer ranging from 1 to 100.<br><b>Default Value</b><br>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 | <b>Definition</b><br>Each element in the list indicates a database account.<br>For details, see <a href="#">Table 5-542</a> . |

| Parameter   | Type    | Description                                                                               |
|-------------|---------|-------------------------------------------------------------------------------------------|
| total_count | Integer | <b>Definition</b><br>Indicates the total number of database users.<br><b>Range</b><br>N/A |

**Table 5-542** users element structure description

| Parameter | Type   | Description                                               |
|-----------|--------|-----------------------------------------------------------|
| name      | String | <b>Definition</b><br>Account name.<br><b>Range</b><br>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       | <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                                                                                             |

| Parameter | Mandatory | Description                                                                                                                                                  |
|-----------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| user_name | Yes       | <b>Definition</b><br>Specifies the username of the account to be deleted.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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  | 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 5-546** 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                                                                                     |
| users     | Yes       | Array of objects | <b>Definition</b><br>Database accounts. Each element is a database account. A single request supports a maximum of 50 elements.<br>For details on the element structure, see <a href="#">Table 5-547</a> . |



Table 5-547 users field data structure description

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                            |
|-----------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | String  | <b>Definition</b><br>Username of the database account.<br><b>Constraints</b><br>Currently, SQL users without login names cannot be authorized.<br><b>Range</b><br>It can contain up to 128 characters and must be different from system usernames.<br>System users include <b>rdsadmin</b> , <b>rdsuser</b> , <b>rdsbackup</b> , and <b>rdsmirror</b> .<br><b>Default Value</b><br>N/A |
| readonly  | No        | Boolean | <b>Definition</b><br>Whether the permission is read-only.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"><li><b>true</b>: read-only</li><li><b>false</b>: read/write</li></ul> <b>Default Value</b><br>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 | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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       | <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 5-550 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 |

| Parameter | Mandatory | Type             | Description                                                                                                                                                                                                                |
|-----------|-----------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| users     | Yes       | Array of objects | <b>Definition</b><br>Database accounts. Each element is a database account. A single request supports a maximum of 50 elements.<br><br>For more information about the element structure, see <a href="#">Table 5-551</a> . |

**Table 5-551** users field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | String | <b>Definition</b><br>Username of the database account.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>It contains 1 to 128 characters and must be different from system usernames. System users include <b>rdsadmin</b> , <b>rdsuser</b> , <b>rdsbackup</b> , and <b>rdsmirror</b> .<br><b>Default Value</b><br>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 | <b>Definition</b><br>Calling result.<br><b>Range</b><br>Returns <b>successful</b> 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       | <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 5-554** Parameters

| Parameter | Mandatory | Type             | Description                                                                                                       |
|-----------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------|
| hosts     | No        | Array of objects | <b>Definition</b><br>Host information.<br>For details on the element structure, see <a href="#">Table 5-555</a> . |

Table 5-555 hosts data structure description

| Parameter | Mand<br>atory | Type   | Description                                                                                                              |
|-----------|---------------|--------|--------------------------------------------------------------------------------------------------------------------------|
| host_name | Yes           | String | <b>Definition</b><br>Host name.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A       |
| ip        | Yes           | String | <b>Definition</b><br>Host IP address.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

Example Request

Add host addresses for MSDTC.

```
POST https://{endpoint}/v3/054b93101a00d3a02fe3c01fb31462ac/instances/
463a6520abc34588850ea5bf245e4fin04/msdtc/host

{
 "hosts" : [{
 "host_name" : "pc1",
 "ip" : "127.0.0.1"
 }]
}
```

Response

- Normal response

Table 5-556 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" : "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 | <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 | 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                                                                                                                                                                                                        |
| offset      | No        | Integer | <b>Definition</b><br>Index offset. The query starts from the next piece of data indexed by this parameter.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value must be a non-negative number.<br><b>Default Value</b><br>The default value is <b>0</b> , indicating that the query starts from the first data record. |
| limit       | No        | Integer | <b>Definition</b><br>Number of records returned by a query.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>1–100<br><b>Default Value</b><br>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          | <b>Definition</b><br>Total number of hosts.<br><b>Range</b><br>N/A                |
| hosts       | Array of objects | <b>Definition</b><br>Host list.<br>For details, see <a href="#">Table 5-559</a> . |

**Table 5-559** hosts element structure description

| Parameter | Type   | Description                                               |
|-----------|--------|-----------------------------------------------------------|
| id        | String | <b>Definition</b><br>Host ID.<br><b>Range</b><br>N/A      |
| host      | String | <b>Definition</b><br>Host address.<br><b>Range</b><br>N/A |
| host_name | String | <b>Definition</b><br>Host name.<br><b>Range</b><br>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       | <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

- 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 | <b>Definition</b><br>Indicates the parameter template list.<br>For details, see <a href="#">Table 5-562</a> . |

**Table 5-562** configurations field data structure description

| Parameter | Type   | Description                                                                      |
|-----------|--------|----------------------------------------------------------------------------------|
| id        | String | <b>Definition</b><br>Indicates the parameter template ID.<br><b>Range</b><br>N/A |

| Parameter              | Type   | Description                                                                                                                                                                                                                                                                                                                           |
|------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name                   | String | <b>Definition</b><br>Indicates the parameter template name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                    |
| description            | String | <b>Definition</b><br>Indicates the parameter template description.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                             |
| datastore_version_name | String | <b>Definition</b><br>Indicates the database version name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                      |
| datastore_name         | String | <b>Definition</b><br>Indicates the database name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                              |
| created                | String | <b>Definition</b><br>Indicates the creation time.<br><b>Range</b><br>The value is in the yyyy-MM-ddTHH:mm:ssZ format. <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> . |
| updated                | String | <b>Definition</b><br>Indicates the update time.<br><b>Range</b><br>The value is in the yyyy-MM-ddTHH:mm:ssZ format. <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> .   |

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                     |
|--------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| user_defined | Boolean | <b>Definition</b><br>Indicates whether the parameter template is a custom template.<br><b>Range</b> <ul style="list-style-type: none"><li>● <b>false</b>: The parameter template is a default parameter template.</li><li>● <b>true</b>: The parameter template is a custom template.</li></ul> |

- 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       | <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 5-564** Parameters

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                       |
|-------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name        | Yes       | String | <p><b>Definition</b><br/>Specifies the parameter template name.</p> <p><b>Constraints</b><br/>It contains a maximum of 64 characters and can contain only uppercase letters, lowercase letters, digits, hyphens (-), underscores (_), and periods (.).</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p>        |
| datastore   | Yes       | Object | <p><b>Definition</b><br/>Specifies the database object.<br/>For details, see <a href="#">Table 5-565</a>.</p> <p><b>Constraints</b><br/>N/A</p>                                                                                                                                                                                   |
| description | No        | String | <p><b>Definition</b><br/>Specifies the parameter template description.</p> <p><b>Constraints</b><br/>It contains a maximum of 256 characters and cannot contain the following special characters: &gt; ! &lt; " &amp; ' = Its value is left blank by default.</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p> |



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

**Table 5-565** datastore field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                       |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | <p><b>Definition</b><br/>DB engine.</p> <p><b>Constraints</b><br/>The value is case-insensitive.</p> <p><b>Range</b></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> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| version   | Yes       | String | <b>Definition</b><br>DB engine version.<br><b>Constraints</b><br>For details, see <a href="#">Constraints</a> .<br><b>Range</b> <ul style="list-style-type: none"> <li>MySQL: <b>5.7</b></li> <li>PostgreSQL: <b>12</b></li> <li>Microsoft SQL Server: <b>2014_SE</b></li> </ul> <b>Default Value</b><br>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 | <b>Definition</b><br>Indicates the parameter template information.<br>For details, see <a href="#">Table 5-567</a> . |

**Table 5-567** configuration field data structure description

| Parameter              | Type   | Description                                                                                                                                                                                                                                                                                                                           |
|------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id                     | String | <b>Definition</b><br>Indicates the parameter template ID.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                      |
| name                   | String | <b>Definition</b><br>Indicates the parameter template name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                    |
| datastore_version_name | String | <b>Definition</b><br>Indicates the database version name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                      |
| datastore_name         | String | <b>Definition</b><br>Indicates the database name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                              |
| description            | String | <b>Definition</b><br>Indicates the parameter template description.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                             |
| created                | String | <b>Definition</b><br>Indicates the creation time.<br><b>Range</b><br>The value is in the yyyy-MM-ddTHH:mm:ssZ format. <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> . |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                         |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| updated   | String | <b>Definition</b><br>Indicates the update time.<br><b>Range</b><br>The value is in the yyyy-MM-ddTHH:mm:ssZ format. <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> . |

- 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       | <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 |
| config_id  | Yes       | <b>Definition</b><br>Specifies the parameter template ID.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Specifies the parameter template name.<br><b>Constraints</b><br>It contains a maximum of 64 characters and can contain only uppercase letters, lowercase letters, digits, hyphens (-), underscores (_), and periods (.).<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| description | No        | String | <b>Definition</b><br>Specifies the parameter template description.<br><b>Constraints</b><br>It contains a maximum of 256 characters and does not support the following special characters: !<>='&"<br>Its value is left blank by default.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A     |

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

## 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 | <b>Definition</b><br>Parameter template information. For details, see <a href="#">Table 5-571</a> . |

**Table 5-571** configuration field data structure description

| Parameter      | Type   | Description                                                                                                                                                                                                                                                                            |
|----------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id             | String | <b>Definition</b><br>Parameter template ID.<br><b>Range</b><br>N/A                                                                                                                                                                                                                     |
| name           | String | <b>Definition</b><br>Parameter template name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                   |
| ignored_params | List   | <b>Definition</b><br>All parameters that are ignored and fail to be modified in the request parameter <b>values</b> .<br>If a parameter does not exist, the modification will fail. The names of all ignored parameters are returned by <b>ignored_params</b> .<br><b>Range</b><br>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       | <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                                                                                                                    |
|-----------|-----------|--------------------------------------------------------------------------------------------------------------------------------|
| config_id | Yes       | <b>Definition</b><br>Parameter template 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 5-573 Parameters

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                |
|-------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name        | Yes       | String | <b>Definition</b><br>Name of the new parameter template.<br><b>Constraints</b><br>The name can contain 1 to 64 characters. It is case-sensitive and can contain only letters, digits, periods (.), underscores (_), and hyphens (-).<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| description | No        | String | <b>Definition</b><br>Description of the new parameter template.<br><b>Constraints</b><br>The description can contain 0 to 256 characters and cannot contain the following characters: ! < > = & " ' ,<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Parameter template ID.<br><b>Range</b><br>N/A          |
| name                   | String | <b>Definition</b><br>Parameter template name.<br><b>Range</b><br>N/A        |
| description            | String | <b>Definition</b><br>Parameter template description.<br><b>Range</b><br>N/A |
| datastore_version_name | String | <b>Definition</b><br>Database version name.<br><b>Range</b><br>N/A          |
| datastore_name         | String | <b>Definition</b><br>Database name.<br><b>Range</b><br>N/A                  |

| Parameter   | Type   | Description                                                                                                                                                                                                                                                                                                             |
|-------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time | String | <b>Definition</b><br>Creation time.<br><b>Range</b><br>The value is in the yyyy-MM-ddTHH:mm:ssZ format. <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> . |
| update_time | String | <b>Definition</b><br>Update time.<br><b>Range</b><br>The value is in the yyyy-MM-ddTHH:mm:ssZ format. <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> .   |

- 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 | <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       | 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                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset     | No        | Integer | <b>Definition</b><br>Pagination parameter.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>0                                                                                                                                                                                                                                                                                                             |
| limit      | No        | Integer | <b>Definition</b><br>Pagination parameter.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>10                                                                                                                                                                                                                                                                                                            |
| start_time | No        | String  | <b>Definition</b><br>Start time.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value is in the "yyyy-mm-ddThh:mm:ssZ" format. <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> .<br><b>Default Value</b><br>The default value is seven days before the current time. |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| end_time   | No        | String | <b>Definition</b><br>End time.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value is in the "yyyy-mm-ddThh:mm:ssZ" format. <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> .<br><b>Default Value</b><br>The default value is the current time. |
| param_name | No        | String | <b>Definition</b><br>Parameter name.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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          | <b>Definition</b><br>Total number of historical records.<br><b>Range</b><br>N/A                       |
| histories   | Array of objects | <b>Definition</b><br>Parameter change history list.<br>For details, see <a href="#">Table 5-577</a> . |

**Table 5-577** histories data structure description

| Parameter      | Type   | Description                                                                                                                                |
|----------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------|
| parameter_name | String | <b>Definition</b><br>Parameter name.<br><b>Range</b><br>N/A                                                                                |
| old_value      | String | <b>Definition</b><br>Old parameter value.<br><b>Range</b><br>N/A                                                                           |
| new_value      | String | <b>Definition</b><br>New parameter value.<br><b>Range</b><br>N/A                                                                           |
| update_result  | String | <b>Definition</b><br>Update result. Valid Value:<br><b>Range</b> <ul style="list-style-type: none"> <li>SUCCESS</li> <li>FAILED</li> </ul> |



| Parameter   | Type    | Description                                                                                                                                                                                                                                                                              |
|-------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| applied     | Boolean | <b>Definition</b><br>Whether the new value has been applied to the instance.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>true</b>: indicates that the new value has been applied.</li> <li>• <b>false</b>: indicates that the new value has not been applied.</li> </ul> |
| update_time | String  | <b>Definition</b><br>Time when the value is updated.<br><b>Range</b><br>N/A                                                                                                                                                                                                              |
| apply_time  | String  | <b>Definition</b><br>Time when the new value is applied to the instance.<br><b>Range</b><br>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       | <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

- Request parameters  
None
- URI example  
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfad23fsfdae3435in01/configurations

## Response

- Normal response

**Table 5-579** Parameters

| Parameter              | Type   | Description                                                                      |
|------------------------|--------|----------------------------------------------------------------------------------|
| datastore_version_name | String | <b>Definition</b><br>Indicates the database version name.<br><b>Range</b><br>N/A |
| datastore_name         | String | <b>Definition</b><br>Indicates the database name.<br><b>Range</b><br>N/A         |

| Parameter                | Type             | Description                                                                                                                                                                                                                                                                                                                           |
|--------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| created                  | String           | <b>Definition</b><br>Indicates the creation time.<br><b>Range</b><br>The value is in the yyyy-MM-ddTHH:mm:ssZ format. <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> . |
| updated                  | String           | <b>Definition</b><br>Indicates the update time.<br><b>Range</b><br>The value is in the yyyy-MM-ddTHH:mm:ssZ format. <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> .   |
| configuration_parameters | Array of objects | <b>Definition</b><br>Indicates the parameters defined by users based on the default parameter templates.<br>For details, see <a href="#">Table 5-580</a> .                                                                                                                                                                            |

**Table 5-580** configuration\_parameters field data structure description

| Parameter | Type   | Description                                                                |
|-----------|--------|----------------------------------------------------------------------------|
| name      | String | <b>Definition</b><br>Indicates the parameter name.<br><b>Range</b><br>N/A  |
| value     | String | <b>Definition</b><br>Indicates the parameter value.<br><b>Range</b><br>N/A |

| Parameter        | Type    | Description                                                                                                                                                                                                                           |
|------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| restart_required | Boolean | <b>Definition</b><br>Indicates whether a reboot is required.<br><b>Range</b> <ul style="list-style-type: none"> <li><b>false</b>: A reboot is not required.</li> <li><b>true</b>: A reboot is required.</li> </ul>                    |
| readonly         | Boolean | <b>Definition</b><br>Indicates whether the parameter is read-only.<br><b>Range</b> <ul style="list-style-type: none"> <li><b>false</b>: The parameter is not read-only.</li> <li><b>true</b>: The parameter is read-only.</li> </ul>  |
| value_range      | String  | <b>Definition</b><br>Indicates the parameter value range.<br><b>Range</b><br>If the parameter type is <b>integer</b> , the value is <b>0</b> or <b>1</b> . If the type is <b>boolean</b> , the value is <b>true</b> or <b>false</b> . |
| type             | String  | <b>Definition</b><br>Indicates the parameter type.<br><b>Range</b><br>The value can be <b>string</b> , <b>integer</b> , <b>boolean</b> , <b>list</b> , or <b>float</b> .                                                              |
| description      | String  | <b>Definition</b><br>Indicates the parameter description.<br><b>Range</b><br>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       | <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>                                                                                             |
| config_id  | Yes       | <p><b>Definition</b><br/>Specifies the parameter template ID.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>When this parameter is empty (not space), the URL of the parameter template list is obtained. For details, see <a href="#">Obtaining a Parameter Template List</a>.</p> <p><b>Default Value</b><br/>N/A</p> |

## 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 | <b>Definition</b><br>Indicates the parameter template ID.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                      |
| name                   | String | <b>Definition</b><br>Indicates the parameter template name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                    |
| datastore_version_name | String | <b>Definition</b><br>Indicates the database version name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                      |
| datastore_name         | String | <b>Definition</b><br>Indicates the database name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                              |
| description            | String | <b>Definition</b><br>Indicates the parameter template description.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                             |
| created                | String | <b>Definition</b><br>Indicates the creation time.<br><b>Range</b><br>The value is in the yyyy-MM-ddTHH:mm:ssZ format. <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> . |



| Parameter                | Type             | Description                                                                                                                                                                                                                                                                                                                         |
|--------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| updated                  | String           | <b>Definition</b><br>Indicates the update time.<br><b>Range</b><br>The value is in the yyyy-MM-ddTHH:mm:ssZ format. <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> . |
| configuration_parameters | Array of objects | <b>Definition</b><br>Indicates the parameters defined by users based on the default parameter templates.<br>For details, see <a href="#">Table 5-583</a> .                                                                                                                                                                          |

**Table 5-583** configuration\_parameters field data structure description

| Parameter        | Type    | Description                                                                                                                                                                                                                                         |
|------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name             | String  | <b>Definition</b><br>Indicates the parameter name.<br><b>Range</b><br>N/A                                                                                                                                                                           |
| value            | String  | <b>Definition</b><br>Indicates the parameter value.<br><b>Range</b><br>N/A                                                                                                                                                                          |
| restart_required | Boolean | <b>Definition</b><br>Indicates whether a restart is required.<br><b>Range</b> <ul style="list-style-type: none"> <li><b>false</b>: indicates that a restart is not required.</li> <li><b>true</b>: indicates that a restart is required.</li> </ul> |

| Parameter   | Type    | Description                                                                                                                                                                                                                                                                           |
|-------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| readonly    | Boolean | <p><b>Definition</b></p> <p>Indicates whether the parameter is read-only.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>false</b>: indicates that the parameter is not read-only.</li> <li>• <b>true</b>: indicates that the parameter is read-only.</li> </ul> |
| value_range | String  | <p><b>Definition</b></p> <p>Indicates the parameter value range.</p> <p><b>Range</b></p> <p>If the parameter type is <b>integer</b>, the value is <b>0</b> or <b>1</b>. If the type is <b>boolean</b>, the value is <b>true</b> or <b>false</b>.</p>                                  |
| type        | String  | <p><b>Definition</b></p> <p>Indicates the parameter type.</p> <p><b>Range</b></p> <p>The value can be <b>string</b>, <b>integer</b>, <b>boolean</b>, <b>list</b>, or <b>float</b>.</p>                                                                                                |
| description | String  | <p><b>Definition</b></p> <p>Indicates the parameter description.</p> <p><b>Range</b></p> <p>N/A</p>                                                                                                                                                                                   |

- 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       | <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 |
| config_id  | Yes       | <b>Definition</b><br>Parameter template ID.<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  
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       | <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 5-586 Parameters

| Parameter      | Mandatory | Type   | Description                                                                                                             |
|----------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------|
| database_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  |
| extension_name | Yes       | String | <b>Definition</b><br>Extension 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

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       | <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>                                                                                                                                                                                                       |
| database_name | Yes       | <p><b>Definition</b><br/>Database name.</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>                                                                                                                                                                                                     |
| 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/>The default value is <b>0</b>, indicating that the query starts from the first data record.</p> |



| Parameter | Mandatory | Description                                                                                                                                |
|-----------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------|
| limit     | No        | <b>Definition</b><br>Number of records to be queried.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>1–100<br><b>Default Value</b><br>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 | <b>Definition</b><br>Extension list.<br>For details, see <a href="#">Table 5-589</a> . |
| total_count | Integer          | <b>Definition</b><br>Total number of extensions.<br><b>Range</b><br>N/A                |

**Table 5-589** extensions element structure description

| Parameter | Type   | Description                                                 |
|-----------|--------|-------------------------------------------------------------|
| name      | String | <b>Definition</b><br>Extension name.<br><b>Range</b><br>N/A |

| Parameter                | Type    | Description                                                                                                                                                                                             |
|--------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database_name            | String  | <b>Definition</b><br>Database name.<br><b>Range</b><br>N/A                                                                                                                                              |
| version                  | String  | <b>Definition</b><br>Extension version.<br><b>Range</b><br>N/A                                                                                                                                          |
| version_update           | String  | <b>Definition</b><br>New version that the extension can be upgraded to. If the value of this parameter is different from that of <b>version</b> , the extension can be upgraded.<br><b>Range</b><br>N/A |
| shared_preload_libraries | String  | <b>Definition</b><br>Dependent preloaded library.<br><b>Range</b><br>N/A                                                                                                                                |
| created                  | Boolean | <b>Definition</b><br>Whether the extension has been created.<br><b>Range</b><br>N/A                                                                                                                     |
| description              | String  | <b>Definition</b><br>Extension description.<br><b>Range</b><br>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       | <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 5-591** Parameters

| Parameter     | Mandatory | Type   | Description                                                                                                            |
|---------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------|
| database_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 |

| Parameter      | Mandatory | Type   | Description                                                                                                             |
|----------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------|
| extension_name | Yes       | String | <b>Definition</b><br>Extension 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

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       | <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 5-593** Parameters

| Parameter      | Mandator<br>y | Type   | Description                                                                                                             |
|----------------|---------------|--------|-------------------------------------------------------------------------------------------------------------------------|
| database_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  |
| extension_name | Yes           | String | <b>Definition</b><br>Extension 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

```
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       | <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                                                                                         |
| name        | Yes       | <b>Definition</b><br>Parameter name.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>Only the <b>shared_preload_libraries</b> parameter can be modified.<br><b>Default Value</b><br>shared_preload_libraries |

## Request

**Table 5-595** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                              |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------|
| value     | Yes       | String | <b>Definition</b><br>Parameter value.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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  | <b>Definition</b><br>Task ID.<br><b>Range</b><br>N/A                                                                                                                                                                                                         |
| restart_required | Boolean | <b>Definition</b><br>Whether a reboot is required.<br>The value can be:<br><b>Range</b> <ul style="list-style-type: none"><li>• <b>true</b>: indicates that a reboot is required.</li><li>• <b>false</b>: indicates that a reboot is not required.</li></ul> |

- 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       | <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                                                                                             |

| Parameter | Mandatory | Description                                                                                                                                                                                                  |
|-----------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | <b>Definition</b><br>Parameter name.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>Only the <b>shared_preload_libraries</b> parameter can be modified.<br><b>Default Value</b><br>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  | <b>Definition</b><br>Parameter name.<br><b>Range</b><br>N/A                                                                                                                                              |
| value            | String  | <b>Definition</b><br>Parameter value.<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> |

| Parameter   | Type   | Description                                                                                                                                                                                                             |
|-------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value_range | String | <b>Definition</b><br>Parameter value range.<br><b>Range</b><br>If the parameter type is <b>integer</b> , the value is <b>0</b> or <b>1</b> . If the type is <b>boolean</b> , the value is <b>true</b> or <b>false</b> . |
| type        | String | <b>Definition</b><br>Parameter type.<br><b>Range</b><br>The value can be <b>string</b> , <b>integer</b> , <b>boolean</b> , <b>list</b> , or <b>float</b> .                                                              |
| description | String | <b>Definition</b><br>Parameter description.<br><b>Range</b><br>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       | <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

- 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     | <b>Definition</b><br>Configured delay, in ms.<br><b>Range</b><br>The replication delay is controlled by the <b>recovery_min_apply_delay</b> parameter. You can modify this parameter to change the delay for replaying WAL logs. For details about how to modify this parameter, see <a href="#">Modifying Parameters of a Specified Instance</a> . |
| delay_time_value_range | String  | <b>Definition</b><br>Value range for the delay.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                              |
| real_delay_time_mills  | int     | <b>Definition</b><br>Actual delay, in ms.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                    |
| cur_log_replay_paused  | boolean | <b>Definition</b><br>Current log replay status.<br><b>Range</b> <ul style="list-style-type: none"> <li><b>true</b>: The replay is paused.</li> <li><b>false</b>: The replay is normal.</li> </ul>                                                                                                                                                   |

| Parameter          | Type   | Description                                                               |
|--------------------|--------|---------------------------------------------------------------------------|
| latest_receive_log | String | <b>Definition</b><br>Latest received log position.<br><b>Range</b><br>N/A |
| latest_replay_log  | String | <b>Definition</b><br>Latest replayed log position.<br><b>Range</b><br>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       | <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>The value cannot be empty.<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>The value cannot be empty.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Left boundary of the recovery time window (excluded).<br><b>Range</b><br>N/A  |
| recovery_max_time | String | <b>Definition</b><br>Right boundary of the recovery time window (included).<br><b>Range</b><br>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       | <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

- Parameter description

**Table 5-604** Parameters

| Parameter        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                  |
|------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| pause_log_replay | Yes       | String | <p><b>Definition</b><br/>Whether to pause or resume WAL replay.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>true</b>: Pause WAL replay.</li> <li>• <b>false</b>: Resume WAL replay.</li> <li>• Other values or left blank: No action will be taken.</li> </ul> <p><b>Default Value</b><br/>N/A</p> |

- 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 | <p><b>Definition</b><br/>Calling result.</p> <p><b>Range</b><br/>Returns <b>operate successfully</b> if the calling is successful.</p> |

- 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       | <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>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 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 | <b>Definition</b><br>Maximum number of databases that can be returned each time.<br><b>Range</b><br>N/A |
| total_tables   | Integer | <b>Definition</b><br>Total number of returned tables.<br><b>Range</b><br>N/A                            |
| table_limit    | Integer | <b>Definition</b><br>Maximum number of tables that can be returned each time.<br><b>Range</b><br>N/A    |

| Parameter | Type             | Description                                                                                                                    |
|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------|
| databases | Array of objects | <b>Definition</b><br>Databases that can be restored to the primary instance.<br>For details, see <a href="#">Table 5-608</a> . |

**Table 5-608** databases field data structure description

| Parameter    | Type             | Description                                                                                     |
|--------------|------------------|-------------------------------------------------------------------------------------------------|
| name         | String           | <b>Definition</b><br>Database name.<br><b>Range</b><br>N/A                                      |
| total_tables | Integer          | <b>Definition</b><br>Total number of tables in the database.<br><b>Range</b><br>N/A             |
| schemas      | Array of objects | <b>Definition</b><br>Schemas in the database.<br>For details, see <a href="#">Table 5-609</a> . |

**Table 5-609** schemas field data structure description

| Parameter    | Type             | Description                                                                                  |
|--------------|------------------|----------------------------------------------------------------------------------------------|
| name         | String           | <b>Definition</b><br>Schema name.<br><b>Range</b><br>N/A                                     |
| total_tables | Integer          | <b>Definition</b><br>Total number of tables in the schema.<br><b>Range</b><br>N/A            |
| tables       | Array of objects | <b>Definition</b><br>Tables in the schema.<br>For details, see <a href="#">Table 5-610</a> . |

**Table 5-610** tables field data structure description

| Parameter | Type   | Description                                             |
|-----------|--------|---------------------------------------------------------|
| name      | String | <b>Definition</b><br>Table name.<br><b>Range</b><br>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       | <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 Parameters

**Table 5-612** Parameters

| Parameter | Mandatory | Type             | Description                                                                                                                                                                         |
|-----------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| databases | Yes       | Array of objects | <b>Definition</b><br>Databases to be restored.<br>For details, see <a href="#">Table 5-613</a> .<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |

**Table 5-613** databases field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                             |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| old_name  | Yes       | String | <b>Definition</b><br>Name of the original database to be restored.<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>Name of the new database 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 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 | <b>Definition</b><br>Task flow ID.<br><b>Range</b><br>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       | <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 5-616** Parameters

| Parameter      | Mandatory | Type   | Description                                                                                                                                                                   |
|----------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| recycle_policy | Yes       | Object | <b>Definition</b><br>Each element is associated with the recycle bin.<br>For details on the element structure, see <a href="#">Table 5-617</a> .<br><b>Constraints</b><br>N/A |

**Table 5-617** recycle\_policy elements

| Parameter                | Mandatory | Type   | Description                                                                                                                                                                                                                                                   |
|--------------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| retention_period_in_days | No        | String | <b>Definition</b><br>Retention days of deleted instances.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value is an integer ranging from 1 to 7.<br><b>Default Value</b><br>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 | <b>Definition</b><br>Calling result.<br><b>Range</b><br><b>success:</b> 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<br>y | 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

- 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 | <b>Definition</b><br>Number of days for retaining instances in the recycle bin.<br><b>Range</b><br>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       | <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>                   |
| offset     | Yes       | <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/>N/A</p> |
| limit      | Yes       | <p><b>Definition</b><br/>Number of records on each page.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>[1, 50]</p> <p><b>Default Value</b><br/>N/A</p>                                                                                        |

## Request

- Parameter description  
None
- URI example  
GET <https://rds.ap-southeast-1.myhuaweicloud.com/v3/054ea741f700d4a32f1bc00f5c80dd4c/recycle-instances?offset=0&limit=10>



## Response

- Normal response

**Table 5-622** Parameters

| Parameter   | Type             | Description                                                                               |
|-------------|------------------|-------------------------------------------------------------------------------------------|
| total_count | Integer          | <b>Definition</b><br>Number of data records in the recycle bin.<br><b>Range</b><br>N/A    |
| instances   | Array of objects | <b>Definition</b><br>Instance information. For details, see <a href="#">Table 5-623</a> . |

**Table 5-623** instances field data structure description

| Parameter      | Type   | Description                                                                                                                                                                                                                  |
|----------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id             | String | <b>Definition</b><br>Instance ID.<br><b>Range</b><br>N/A                                                                                                                                                                     |
| name           | String | <b>Definition</b><br>Instance name.<br><b>Range</b><br>N/A                                                                                                                                                                   |
| ha_mode        | String | <b>Definition</b><br>Instance type.<br><b>Range</b><br>The value is case-insensitive. <ul style="list-style-type: none"> <li>• <b>Single</b>: single-node instance</li> <li>• <b>Ha</b>: primary/standby instance</li> </ul> |
| engine_name    | String | <b>Definition</b><br>DB engine name.<br><b>Range</b><br>N/A                                                                                                                                                                  |
| engine_version | String | <b>Definition</b><br>DB engine version.<br><b>Range</b><br>N/A                                                                                                                                                               |

| Parameter   | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| pay_model   | String | <p><b>Definition</b><br/>Billing mode.</p> <p><b>Range</b><br/>0: pay-per-use billing<br/>1: yearly/monthly billing</p>                                                                                                                                                                                                                                                                                                                                                                                                     |
| created_at  | String | <p><b>Definition</b><br/>Creation time.</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, if the time zone offset is one hour, the value of <b>Z</b> is <b>+0100</b>.</p>                                                                                                                                                                                |
| deleted_at  | String | <p><b>Definition</b><br/>Deletion time.</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, if the time zone offset is one hour, the value of <b>Z</b> is <b>+0100</b>.</p>                                                                                                                                                                                |
| volume_type | 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>ULTRAHIGHPRO</b>: ultra-high I/O (advanced) storage. This storage type is supported only with ultra-high performance (advanced) instances (permission required).</li> <li>● <b>CLOUDSSD</b>: cloud SSD storage. This storage type is supported only with general-purpose and dedicated instances.</li> <li>● <b>LOCALSSD</b>: local SSD storage.</li> </ul> |

| Parameter             | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| volume_size           | Integer | <p><b>Definition</b><br/>Storage space.</p> <p><b>Range</b><br/>40–4000, in GB. The value must be a multiple of 10.</p> <p>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.</p> <p>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.</p> |
| data_vip              | String  | <p><b>Definition</b><br/>Floating IP address.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                                                                        |
| data_vip_v6           | String  | <p><b>Definition</b><br/>Private IPv6 address.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                                                                       |
| enterprise_project_id | String  | <p><b>Definition</b><br/>Enterprise project ID.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                                                                      |
| retained_until        | String  | <p><b>Definition</b><br/>Time until which the instance can be retained.</p> <p><b>Range</b><br/>The value is in the "yyyy-mm-ddThh:mm:ssZ" format.</p> <p><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, if the time zone offset is one hour, the value of <b>Z</b> is <b>+0100</b>.</p>                                                                      |
| recycle_backup_id     | String  | <p><b>Definition</b><br/>Backup ID.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                  |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                          |
|----------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| recycle_status | String  | <b>Definition</b><br>Backup status.<br><b>Range</b> <ul style="list-style-type: none"> <li>● <b>BUILDING</b>: The instance is being backed up and cannot be rebuilt.</li> <li>● <b>COMPLETED</b>: The backup is complete and the instance can be rebuilt.</li> </ul> |
| is_serverless  | Boolean | <b>Definition</b><br>Instance type.<br><b>Range</b> <ul style="list-style-type: none"> <li>● <b>true</b>: serverless</li> <li>● <b>false</b>: non-serverless</li> </ul>                                                                                              |

- 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       | <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 5-625** Parameters

| Parameter | Mandatory | Type             | Description                                                                                                                                                                                  |
|-----------|-----------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| action    | Yes       | String           | <b>Definition</b><br>Operation identifier.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value is case-sensitive and is <b>create</b> for tag creation.<br><b>Default Value</b><br>N/A |
| tags      | Yes       | Array of objects | <b>Definition</b><br>Tag list. A maximum of 20 tags can be added for each instance.<br>For details, see <a href="#">Table 5-626</a> .<br><b>Constraints</b><br>N/A                           |

**Table 5-626** tags field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | <b>Definition</b><br>Tag key.<br><b>Constraints</b><br>N/A<br><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> .<br><b>Default Value</b><br>N/A |
| value     | Yes       | String | <b>Definition</b><br>Tag value.<br><b>Constraints</b><br>N/A<br><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> .<br><b>Default Value</b><br>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       | <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 5-628** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                  |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| action    | Yes       | String | <b>Definition</b><br>Operation identifier.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>The value is case-sensitive and is <b>delete</b> for tag deletion.<br><b>Default Value</b><br>N/A |

| Parameter | Mandatory | Type             | Description                                                                                                   |
|-----------|-----------|------------------|---------------------------------------------------------------------------------------------------------------|
| tags      | Yes       | Array of objects | <b>Definition</b><br>Tag list.<br>For details, see <a href="#">Table 5-629</a> .<br><b>Constraints</b><br>N/A |

**Table 5-629** tags field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | <b>Definition</b><br>Tag key.<br><b>Constraints</b><br>N/A<br><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> .<br><b>Default Value</b><br>N/A |
| value     | No        | String | <b>Definition</b><br>Tag value.<br><b>Constraints</b><br>N/A<br><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> .<br><b>Default Value</b><br>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       | <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

- 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 | <b>Definition</b><br>Specifies the tag list. If there is no tag in the list, an empty array is returned.<br>For details, see <a href="#">Table 5-632</a> . |

**Table 5-632** tags field data structure description

| Parameter | Type   | Description                                                        |
|-----------|--------|--------------------------------------------------------------------|
| key       | String | <b>Definition</b><br>Specifies the tag key.<br><b>Range</b><br>N/A |

| Parameter | Type         | Description                                                          |
|-----------|--------------|----------------------------------------------------------------------|
| values    | List<String> | <b>Definition</b><br>Specifies the tag value.<br><b>Range</b><br>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       | <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

- 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 | <b>Definition</b><br>Tag list. If there is no tag added for the instance, an empty array is returned.<br>For details, see <a href="#">Table 5-635</a> . |

**Table 5-635** tags field data structure description

| Parameter | Type   | Description                                                                                        |
|-----------|--------|----------------------------------------------------------------------------------------------------|
| key       | String | <b>Definition</b><br>Tag key.<br><b>Range</b><br>N/A                                               |
| value     | String | <b>Definition</b><br>Tag value.<br><b>Range</b><br>N/A                                             |
| tag_type  | String | <b>Definition</b><br>Tag type.<br><b>Range</b><br>Enumerated values: <b>user</b> and <b>system</b> |

- 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       | <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

- Request parameters  
None
- URI example  
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/quotas



## Response

- Normal response

**Table 5-637** Parameters

| Parameter | Type   | Description                                                                                                     |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| quotas    | Object | <b>Definition</b><br>Specifies the objects in the quota list.<br>For details, see <a href="#">Table 5-638</a> . |

**Table 5-638** quotas field data structure description

| Parameter | Type             | Description                                                                                                 |
|-----------|------------------|-------------------------------------------------------------------------------------------------------------|
| resources | Array of objects | <b>Definition</b><br>Indicates the resource list objects.<br>For details, see <a href="#">Table 5-639</a> . |

**Table 5-639** resources field data structure description

| Parameter | Type    | Description                                                                                                      |
|-----------|---------|------------------------------------------------------------------------------------------------------------------|
| quota     | Integer | <b>Definition</b><br>Indicates the project resource quota.<br><b>Range</b><br>N/A                                |
| used      | Integer | <b>Definition</b><br>Indicates the number of used resources.<br><b>Range</b><br>N/A                              |
| type      | String  | <b>Definition</b><br>Indicates the project resource type.<br><b>Range</b><br><b>instance:</b> 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  | <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>                                                                                         |
| offset     | No        | Integer | <p><b>Definition</b><br/>Index offset.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>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.</p> <p><b>Default Value</b><br/><b>0</b>: The query starts from the first data record.</p> |
| limit      | No        | Integer | <p><b>Definition</b><br/>Number of records returned by a query.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value must be a positive integer ranging from 1 to 50.</p> <p><b>Default Value</b><br/>10</p>                                                                                                     |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_id   | No        | String | <b>Definition</b><br>Instance ID, which can be used for filtering.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                    |
| instance_name | No        | String | <b>Definition</b><br>Instance name, which can be used for filtering.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                  |
| status        | No        | String | <b>Definition</b><br>Task status, which can be used for filtering.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>Initing</b>: The task is being initialized.</li> <li>• <b>Pending</b>: The task is pending.</li> <li>• <b>Running</b>: The task is running.</li> <li>• <b>Completed</b>: The task is complete.</li> <li>• <b>Failed</b>: The task failed.</li> <li>• <b>Unauthorized</b>: The task is unauthorized.</li> <li>• <b>Canceled</b>: The task is canceled.</li> </ul> <b>Default Value</b><br>N/A |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                     |
|------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_time | No        | String | <b>Definition</b><br>Task start time.<br><b>Constraints</b><br>If <b>start_time</b> is specified, <b>end_time</b> is mandatory. The value is in the UTC timestamp format.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| end_time   | No        | String | <b>Definition</b><br>Task end time.<br><b>Constraints</b><br>If <b>start_time</b> is specified, <b>end_time</b> is mandatory. The value is in the UTC timestamp format.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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 | <b>Definition</b><br>Scheduled task list. For details, see <a href="#">Table 5-642</a> . |

| Parameter   | Type    | Description                                                        |
|-------------|---------|--------------------------------------------------------------------|
| total_count | Integer | <b>Definition</b><br>Total number of tasks.<br><b>Range</b><br>N/A |

**Table 5-642** schedule\_tasks field description

| Parameter     | Type   | Description                                                 |
|---------------|--------|-------------------------------------------------------------|
| id            | String | <b>Definition</b><br>Task ID.<br><b>Range</b><br>N/A        |
| name          | String | <b>Definition</b><br>Task name.<br><b>Range</b><br>N/A      |
| instance_id   | String | <b>Definition</b><br>Instance ID.<br><b>Range</b><br>N/A    |
| instance_name | String | <b>Definition</b><br>Instance name.<br><b>Range</b><br>N/A  |
| engine_name   | String | <b>Definition</b><br>DB engine name.<br><b>Range</b><br>N/A |

| Parameter       | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_status | String | <p><b>Definition</b><br/>Instance status.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>BUILD</b>: The instance is being created.</li> <li>• <b>CREATE FAIL</b>: The instance failed to be created.</li> <li>• <b>ACTIVE</b>: The instance is normal.</li> <li>• <b>FAILED</b>: The instance is abnormal.</li> <li>• <b>FROZEN</b>: The instance is frozen.</li> <li>• <b>MODIFYING</b>: The instance is being scaled up.</li> <li>• <b>REBOOTING</b>: The instance is being rebooted.</li> <li>• <b>RESTORING</b>: The instance is being restored.</li> <li>• <b>MODIFYING INSTANCE TYPE</b>: The instance is being changed to primary/standby.</li> <li>• <b>SWITCHOVER</b>: A primary/standby switchover is being performed.</li> <li>• <b>MIGRATING</b>: The instance is being migrated.</li> <li>• <b>BACKING UP</b>: The instance is being backed up.</li> <li>• <b>MODIFYING DATABASE PORT</b>: The database port is being changed.</li> <li>• <b>STORAGE FULL</b>: The instance storage is full.</li> </ul> |
| project_id      | String | <p><b>Definition</b><br/>Project ID.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| Parameter   | Type   | Description                                                                                                                                                                                                                                                                                                                                        |
|-------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time | String | <p><b>Definition</b></p> <p>Task creation time in the "yyyy-mm-ddThh:mm:ssZ" format.</p> <p><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>Range</b></p> <p>N/A</p>      |
| start_time  | String | <p><b>Definition</b></p> <p>Planned task start time in the "yyyy-mm-ddThh:mm:ssZ" format.</p> <p><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>Range</b></p> <p>N/A</p> |
| end_time    | String | <p><b>Definition</b></p> <p>Planned task end time in the "yyyy-mm-ddThh:mm:ssZ" format.</p> <p><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>Range</b></p> <p>N/A</p>   |
| order       | String | <p><b>Definition</b></p> <p>Task priority.</p> <p><b>Range</b></p> <p>An integer ranging from 1 to 100. A smaller value indicates a higher priority.</p>                                                                                                                                                                                           |



| Parameter      | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status         | String | <b>Definition</b><br>Task status.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>Initing</b>: The task is being initialized.</li> <li>• <b>Pending</b>: The task is pending.</li> <li>• <b>Running</b>: The task is running.</li> <li>• <b>Completed</b>: The task is complete.</li> <li>• <b>Failed</b>: The task failed.</li> <li>• <b>Unauthorized</b>: The task is unauthorized.</li> <li>• <b>Canceled</b>: The task is canceled.</li> <li>• <b>Deleted</b>: The task is deleted.</li> </ul> |
| datastore_type | String | <b>Definition</b><br>Database type.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| volume_type    | String | <b>Definition</b><br>Storage type.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| target_config  | object | <b>Definition</b><br>Target configuration. For details, see <a href="#">Table 5-643</a> .                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Table 5-643** target\_config

| Parameter | Type   | Description                                                                                                                                                 |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| flavor    | String | <b>Definition</b><br>Instance class.<br><b>Range</b><br>If <b>name</b> is set to <b>RESIZE_FLAVOR</b> , this parameter indicates the target instance class. |

| Parameter | Type   | Description                                                                                                                                          |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| cpu       | String | <b>Definition</b><br>Instance vCPUs.<br><b>Range</b><br>If <b>name</b> is set to <b>RESIZE_FLAVOR</b> , this parameter indicates the target vCPUs.   |
| mem       | String | <b>Definition</b><br>Instance memory.<br><b>Range</b><br>If <b>name</b> is set to <b>RESIZE_FLAVOR</b> , this parameter indicates the target memory. |

- Example normal response

```
{
 "schedule_task": [{
 "id": "676e9f17f9b74289883a44a47b8101f5",
 "instance_id": "4d00c7e9d22145deb889937a72b59c8ein01",
 "instance_name": "rds-local-scale",
 "instance_status": "ACTIVE",
 "project_id": "54623db08b174c858ba779d2aa7923a3",
 "name": "RESIZE_FLAVOR_SWITCH",
 "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": "Initing",
 "datastore_type": "mysql",
 "volume_type": "LOCALSSD"
 }, {
 "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": 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](#).

## 5.24.2 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 | <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 | Type    | Description                                                                                                                                                                                                                                                                                                                     |
|-------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset      | No        | Integer | <p><b>Definition</b><br/>Index offset.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>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.</p> <p><b>Default Value</b><br/><b>0:</b> The query starts from the first data record.</p> |
| limit       | No        | Integer | <p><b>Definition</b><br/>Number of records returned by a query.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value must be a positive integer ranging from 1 to 50.</p> <p><b>Default Value</b><br/>10</p>                                                                                                     |
| id          | No        | String  | <p><b>Definition</b><br/>Task ID, which can be used for filtering.</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 | No        | String  | <p><b>Definition</b><br/>Instance ID, which can be used for filtering.</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                                                                                                                                                                                                                                                                                                                        |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| order_id   | No        | String | <b>Definition</b><br>Order ID, which can be used for filtering.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                                                                                                                 |
| name       | No        | String | <b>Definition</b><br>Task name, which can be used for filtering.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                                                                                                                                |
| status     | No        | String | <b>Definition</b><br>Task status, which can be used for filtering.<br><b>Constraints</b><br>N/A<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>Running:</b> The task is running.</li> <li>• <b>Completed:</b> The task is complete.</li> <li>• <b>Failed:</b> The task failed.</li> </ul> <b>Default Value</b><br>N/A |
| start_time | No        | String | <b>Definition</b><br>Task creation time, which can be used for filtering.<br><b>Constraints</b><br>If <b>start_time</b> is specified, <b>end_time</b> is mandatory. The value is in the UTC timestamp format.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A                                                                |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                    |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| end_time  | No        | String | <b>Definition</b><br>Task end time, which can be used for filtering.<br><b>Constraints</b><br>If <b>start_time</b> is specified, <b>end_time</b> is mandatory. The value is in the UTC timestamp format.<br><b>Range</b><br>N/A<br><b>Default Value</b><br>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          | <b>Definition</b><br>Total number of tasks.<br><b>Range</b><br>N/A             |
| actions     | Array of strings | <b>Definition</b><br>List of task names.<br><b>Range</b><br>N/A                |
| tasks       | Array of objects | <b>Definition</b><br>Task list. For details, see <a href="#">Table 5-646</a> . |

Table 5-646 schedule\_tasks field description

| Parameter     | Type   | Description                                                |
|---------------|--------|------------------------------------------------------------|
| id            | String | <b>Definition</b><br>Task ID.<br><b>Range</b><br>N/A       |
| name          | String | <b>Definition</b><br>Task name.<br><b>Range</b><br>N/A     |
| instance_id   | String | <b>Definition</b><br>Instance ID.<br><b>Range</b><br>N/A   |
| instance_name | String | <b>Definition</b><br>Instance name.<br><b>Range</b><br>N/A |

| Parameter       | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_status | String | <p><b>Definition</b><br/>Instance status.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• <b>BUILD</b>: The instance is being created.</li> <li>• <b>CREATE FAIL</b>: The instance failed to be created.</li> <li>• <b>ACTIVE</b>: The instance is normal.</li> <li>• <b>FAILED</b>: The instance is abnormal.</li> <li>• <b>FROZEN</b>: The instance is frozen.</li> <li>• <b>MODIFYING</b>: The instance is being scaled up.</li> <li>• <b>REBOOTING</b>: The instance is being rebooted.</li> <li>• <b>RESTORING</b>: The instance is being restored.</li> <li>• <b>MODIFYING INSTANCE TYPE</b>: The instance is being changed to primary/standby.</li> <li>• <b>SWITCHOVER</b>: A primary/standby switchover is being performed.</li> <li>• <b>MIGRATING</b>: The instance is being migrated.</li> <li>• <b>BACKING UP</b>: The instance is being backed up.</li> <li>• <b>MODIFYING DATABASE PORT</b>: The database port is being changed.</li> <li>• <b>STORAGE FULL</b>: The instance storage is full.</li> </ul> |
| order_id        | String | <p><b>Definition</b><br/>Order ID.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| process         | String | <p><b>Definition</b><br/>Task progress, in percentage.</p> <p><b>Range</b><br/>0–100. If the task is in the <b>Completed</b> or <b>Failed</b> status, the value is an empty string.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |



| Parameter   | Type   | Description                                                                                                                                                                                                                                                                                                                |
|-------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| fail_reason | String | <b>Definition</b><br>Failure cause.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                 |
| create_time | String | <b>Definition</b><br>Task creation time 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> .<br><b>Range</b><br>N/A    |
| end_time    | String | <b>Definition</b><br>Planned task end time 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> .<br><b>Range</b><br>N/A |
| status      | String | <b>Definition</b><br>Task status.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>Running</b>: The task is running.</li> <li>• <b>Completed</b>: The task is complete.</li> <li>• <b>Failed</b>: The task failed.</li> </ul>                                                                                   |

- 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       | <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 |
| id         | Yes       | <b>Definition</b><br>Task ID.<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/jobs?id=a9767ede-fe0f-4888-9003-e843a4c90514

## Response

- Normal response

**Table 5-648** Parameters

| Parameter | Type   | Description                                                                                            |
|-----------|--------|--------------------------------------------------------------------------------------------------------|
| job       | Object | <b>Definition</b><br>Indicates the task information.<br>For details, see <a href="#">Table 5-649</a> . |

**Table 5-649** job field data structure description

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                |
|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | <b>Definition</b><br>Indicates the job ID.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                          |
| name      | String | <b>Definition</b><br>Indicates the task name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                                       |
| status    | String | <b>Definition</b><br>Indicates the task execution status.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>Running:</b> The task is being executed.</li> <li>• <b>Completed:</b> The task is successfully executed.</li> <li>• <b>Failed:</b> The task fails to be executed.</li> </ul>                                         |
| created   | String | <b>Definition</b><br>Indicates the creation time.<br><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> . |
| ended     | String | <b>Definition</b><br>Indicates the end time.<br><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> .      |

| Parameter   | Type   | Description                                                                                                                                                                                                                             |
|-------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| process     | String | <b>Definition</b><br>Indicates the task execution progress.<br><b>Range</b><br>The execution progress (such as "60%") is displayed only when the task is being executed. Otherwise, "" is returned.                                     |
| instance    | Object | <b>Definition</b><br>Indicates information of the DB instance on which the task is executed.<br>For details, see <a href="#">Table 5-650</a> .                                                                                          |
| entities    | Object | <b>Definition</b><br>The displayed information varies depending on the tasks.<br>For details, see <a href="#">Table 5-651</a> .<br><b>NOTE</b><br>For asynchronous tasks without the <b>entities</b> field description, {} is returned. |
| fail_reason | String | <b>Definition</b><br>Indicates the error information displayed when a task failed.<br><b>Range</b><br>N/A                                                                                                                               |

**Table 5-650** instances field data structure description

| Parameter | Type   | Description                                                                 |
|-----------|--------|-----------------------------------------------------------------------------|
| id        | String | <b>Definition</b><br>Indicates the DB instance ID.<br><b>Range</b><br>N/A   |
| name      | String | <b>Definition</b><br>Indicates the DB instance name.<br><b>Range</b><br>N/A |

**Table 5-651** entities field data structure description

| Parameter       | Type             | Description                                                                                                                                                                                                    |
|-----------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance        | Object           | <b>Definition</b><br>Indicates the information required for creating an instance, changing a single instance to primary/standby, or creating a read replica.<br>For details, see <a href="#">Table 5-652</a> . |
| resource_ids    | Array of strings | <b>Definition</b><br>Indicates the queried resource ID.<br><b>Range</b><br>N/A                                                                                                                                 |
| volume          | Object           | <b>Definition</b><br>Indicates the information about the resized disk.<br>For details, see <a href="#">Table 5-654</a> .                                                                                       |
| public_ip       | String           | <b>Definition</b><br>Indicates the EIP bound to the DB instance.<br><b>Range</b><br>N/A                                                                                                                        |
| switch_strategy | String           | <b>Definition</b><br>Indicates the primary/standby switchover policy.<br><b>Range</b><br>N/A                                                                                                                   |

**Table 5-652** entities.instance field data structure description

| Parameter | Type   | Description                                                                               |
|-----------|--------|-------------------------------------------------------------------------------------------|
| endpoint  | String | <b>Definition</b><br>Indicates the DB instance connection address.<br><b>Range</b><br>N/A |

| Parameter  | Type   | Description                                                                                                                                                                                                                                         |
|------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type       | String | <b>Definition</b><br>Indicates the DB instance type.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>Single</b>: single-node instance</li> <li>• <b>Ha</b>: primary/standby instance</li> <li>• <b>Replica</b>: read replica</li> </ul> |
| datastore  | Object | <b>Definition</b><br>Indicates the database information. For details, see <a href="#">Table 5-653</a> .                                                                                                                                             |
| replica_of | String | <b>Definition</b><br>Indicates the primary DB instance ID. This parameter is returned only when a read replica is created.<br><b>Range</b><br>N/A                                                                                                   |

**Table 5-653** datastore field data structure description

| Parameter | Type   | Description                                                                 |
|-----------|--------|-----------------------------------------------------------------------------|
| type      | String | <b>Definition</b><br>Indicates the DB engine.<br><b>Range</b><br>N/A        |
| version   | String | <b>Definition</b><br>Indicates the database version.<br><b>Range</b><br>N/A |

**Table 5-654** volume field data structure description

| Parameter | Type   | Description                                                            |
|-----------|--------|------------------------------------------------------------------------|
| type      | String | <b>Definition</b><br>Indicates the volume type.<br><b>Range</b><br>N/A |

| Parameter     | Type   | Description                                                                           |
|---------------|--------|---------------------------------------------------------------------------------------|
| original_size | String | <b>Definition</b><br>Indicates the original volume size in GB.<br><b>Range</b><br>N/A |
| target_size   | String | <b>Definition</b><br>Indicates the target volume size in GB.<br><b>Range</b><br>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       | <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                            |
| start_time  | Yes       | <b>Definition</b><br>Start time in the UTC timestamp format.<br><b>Constraints</b><br>N/A<br><b>Range</b><br>N/A<br><b>Default Value</b><br>N/A |
| end_time    | No        | <b>Definition</b><br>End time in the UTC timestamp format.<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/a48e43ff268f4c0e879652d65e63d0fbin01/tasklist/detail?start\_time=1533423274000&end\_time=1533823274000

## Response

- Normal response

**Table 5-656** Parameters

| Parameter | Type    | Description                                                                                            |
|-----------|---------|--------------------------------------------------------------------------------------------------------|
| jobs      | Object  | <b>Definition</b><br>Indicates the task information.<br>For details, see <a href="#">Table 5-657</a> . |
| count     | Integer | <b>Definition</b><br>Indicates the total number of tasks.<br><b>Range</b><br>N/A                       |

**Table 5-657** jobs field data structure description

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                        |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | <b>Definition</b><br>Indicates the task ID.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                 |
| name      | String | <b>Definition</b><br>Indicates the task name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                               |
| status    | String | <b>Definition</b><br>Indicates the task execution status.<br><b>Range</b> <ul style="list-style-type: none"> <li>• <b>Running:</b> The task is being executed.</li> <li>• <b>Completed:</b> The task is successfully executed.</li> <li>• <b>Failed:</b> The task fails to be executed.</li> </ul> |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                             |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| created   | String | <p><b>Definition</b><br/>Indicates the creation time.</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> |
| ended     | String | <p><b>Definition</b><br/>Indicates the end time.</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>      |
| process   | String | <p><b>Definition</b><br/>Indicates the task execution progress.</p> <p><b>Range</b><br/>The execution progress (such as "60", indicating the task execution progress is 60%) is displayed only when the task is being executed. Otherwise, "" is returned.</p>                                                                                          |
| instance  | Object | <p><b>Definition</b><br/>Indicates information of the DB instance on which the task is executed.</p> <p>For details, see <a href="#">Table 5-658</a>.</p>                                                                                                                                                                                               |

| Parameter   | Type   | Description                                                                                                                                                                                                                                                                                                                                                 |
|-------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| task_detail | String | <b>Definition</b><br>The displayed information varies depending on the tasks.<br>For details, see the following: <ul style="list-style-type: none"> <li>• <a href="#">Table 5-659</a></li> <li>• <a href="#">Table 5-660</a></li> </ul> <b>NOTE</b><br>This field is not displayed for asynchronous tasks that do not contain the <b>task_detail</b> field. |
| fail_reason | String | <b>Definition</b><br>Indicates the error information displayed when a task failed.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                   |
| entities    | Object | <b>Definition</b><br>The displayed information varies depending on the tasks.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                                        |

**Table 5-658** instance field data structure description

| Parameter | Type   | Description                                                                 |
|-----------|--------|-----------------------------------------------------------------------------|
| id        | String | <b>Definition</b><br>Indicates the DB instance ID.<br><b>Range</b><br>N/A   |
| name      | String | <b>Definition</b><br>Indicates the DB instance name.<br><b>Range</b><br>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       | <b>Definition</b><br>Indicates the ID of the original DB instance to which backup data is restored.<br><b>Range</b><br>N/A |
| targetInstanceId | String       | <b>Definition</b><br>Indicates the ID of the target DB instance to which backup data is restored.<br><b>Range</b><br>N/A   |
| backupId         | String       | <b>Definition</b><br>Indicates the backup file ID.<br><b>Range</b><br>N/A                                                  |
| restoreTime      | String       | <b>Definition</b><br>Indicates the time point to which table-level data is restored.<br><b>Range</b><br>N/A                |
| type             | String       | <b>Definition</b><br>Indicates the task type.<br><b>Range</b><br>N/A                                                       |
| dbNames          | List<String> | <b>Definition</b><br>Indicates the database name.<br><b>Range</b><br>N/A                                                   |



**Table 5-660** task\_detail field data structure description (creating automated or manual backups)

| Parameter   | Type   | Description                                                                                      |
|-------------|--------|--------------------------------------------------------------------------------------------------|
| instanceId  | String | <b>Definition</b><br>Indicates the ID of the DB instance to be backed up.<br><b>Range</b><br>N/A |
| name        | String | <b>Definition</b><br>Indicates the task name.<br><b>Range</b><br>N/A                             |
| description | String | <b>Definition</b><br>Indicates the task description.<br><b>Range</b><br>N/A                      |
| dbNames     | String | <b>Definition</b><br>Indicates the name of the data to be backed up.<br><b>Range</b><br>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-99f5-7cfe2a21c37a",
 "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\\":\\"backeeeee\\",\\"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.<br>For details, see <a href="#">Table 6-2</a> . |

**Table 6-2** versions field data structure description

| Parameter | Type             | Description                                                                                                                                                                                                                           |
|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String           | Indicates the API version.<br>Valid values: <ul style="list-style-type: none"> <li>• <b>v1</b>: indicates the API v1 version.</li> <li>• <b>v3</b>: indicates the API v3 version.</li> </ul>                                          |
| links     | Array of objects | Indicates the API link information. The value is empty when the version is v1 or v3.<br>For details, see <a href="#">Table 6-3</a> .                                                                                                  |
| status    | String           | Indicates the version status. <ul style="list-style-type: none"> <li>• <b>CURRENT</b>: indicates that the version is recommended.</li> <li>• <b>DEPRECATED</b>: indicates a deprecated version which may be deleted later.</li> </ul> |

| Parameter | Type   | Description                                                                                                                                                                                                          |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| updated   | String | Indicates the version update time in the "yyyy-mm-dd Thh:mm:ssZ" format.<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 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 <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](#).

## 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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. <ul style="list-style-type: none"><li>• <b>true</b>: Delay the upgrade. The instance will be upgraded during the specified maintenance window.</li><li>• <b>false</b>: Upgrade the instance immediately (default value).</li></ul> |

## 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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", "fe5f5a07539c431181fc78220713aebain01"]
}
```

## 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.<br>For details, see <a href="#">Table 6-10</a> .                                                                                                                                                                                                                                                    |
| success            | Boolean          | Whether the parameter template is applied to all requested DB instances successfully. <ul style="list-style-type: none"><li>• <b>true</b>: The parameter template was successfully applied to all requested DB instances.</li><li>• <b>false</b>: The parameter template failed to be applied to one or more requested DB instances.</li></ul> |
| 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. <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> |

| Parameter | Type    | Description                                                                                                                                                                                                               |
|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| success   | Boolean | Whether the parameter template is applied to the DB instance successfully. <ul style="list-style-type: none"><li>• <b>true</b>: The application was successful.</li><li>• <b>false</b>: The application failed.</li></ul> |

- 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| instance_id | Yes       | Specifies the DB instance ID.                                                                                          |

## Request

Parameter description

**Table 6-12** Parameters

| Parameter | Mandatory | Type               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| values    | Yes       | Map<String,String> | <p>Specifies the parameter values defined by users based on the default parameter templates.</p> <ul style="list-style-type: none"><li>• <b>key</b>: parameter name, for example, <b>div_precision_increment</b> or <b>connect_timeout</b>. If this parameter is not specified, no parameter value is to be changed.</li><li>• <b>value</b>: parameter value, for example, <b>6</b> or <b>20</b>. If <b>key</b> is not empty, the parameter <b>value</b> cannot be empty, either.</li></ul> |

## 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. <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>                                                                 |
| ignored_params   | List    | All parameters that are ignored and fail to be modified in the request parameter <b>values</b> .<br><br>If a parameter does not exist, the modification will fail. The names of all ignored parameters are returned by <b>ignored_params</b> . |

- 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<br>2012 Standard Edition<br>2012 Enterprise Edition |
| 2012 Standard Edition      | 2012 Standard Edition<br>2012 Enterprise Edition                     |
| 2012 Enterprise Edition    | 2012 Enterprise Edition                                              |
| 2014 Standard Edition      | 2014 Standard Edition<br>2014 Enterprise Edition                     |
| 2014 Enterprise Edition    | 2014 Enterprise Edition                                              |
| 2016 Standard Edition      | 2016 Standard Edition<br>2016 Enterprise Edition                     |
| 2016 Enterprise Edition    | 2016 Enterprise Edition                                              |

| Original DB Engine Version | Restore To                                                           |
|----------------------------|----------------------------------------------------------------------|
| 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/{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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |

## Request

Parameter description

**Table 6-16** Parameters

| Parameter | Mandatory | Type   | Description                                                                             |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------|
| source    | Yes       | Object | Specifies the restoration information.<br>For details, see <a href="#">Table 6-17</a> . |
| target    | Yes       | Object | Specifies the restoration target.<br>For details, see <a href="#">Table 6-18</a> .      |



**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: <ul style="list-style-type: none"> <li>• <b>backup</b>: 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>: indicates the point-in-time restoration mode. In this mode, <b>type</b> and <b>restore_time</b> are mandatory.</li> </ul> |
| 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> | <p>This parameter applies only to the Microsoft SQL Server DB engine.</p> <ul style="list-style-type: none"> <li>If this parameter is specified, you can restore all or specific databases and rename new databases.</li> <li>If this parameter is not specified, all databases are restored by default.</li> <li>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.</li> <li>Note the following when you are specifying new database names: <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, tempdb, model, and resource.</li> <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> </li> </ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p>Example:<br/>"database_name":{"Original database name":"New database name"}</p> <p>Correct example: "database_name":<br/>{"A":"A,A1,A2","B":"B1,B2","C":""}</p> <p>Wrong example: "database_name":<br/>{"A":"A","B":"B1,B2","C":"B1,C1","D":"D1,d1"},</p> <p>Error causes are as follows:</p> <ol style="list-style-type: none"> <li>1. The new database name (A) is the same as the original database name (A).</li> <li>2. The new database name (B1) is not unique.</li> <li>3. When the database name is case insensitive, the database names D1 and d1 conflict.</li> </ol> <ul style="list-style-type: none"> <li>• Exercise caution when restoring data to an existing or original DB instance.</li> </ul> <p><b>NOTICE</b><br/>Before the restoration, make sure that the size of the restored data does not exceed the purchased disk capacity. Expand disk capacity, if necessary.</p> |

**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": "b021670e69ba4538b7b2ed07257306aeb04",
 "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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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 <a href="#">Table 6-22</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| is_fast_restore | No        | Boolean          | <p>Whether to use fast restoration. The value can be <b>true</b> or <b>false</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> |

**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 <a href="#">Table 6-23</a> . |

**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/dsf23fsfdae3435in01/restore/tables

{
 "restoreTime": 1583720991838,
 "restoreTables": [
 {
 "database": "restoretst",
 "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<br>y | Description                                                                                                            |
|-------------|---------------|------------------------------------------------------------------------------------------------------------------------|
| project_id  | Yes           | Specifies the 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.                                                                                          |
| db_name     | Yes           | Specifies the name of the database to be deleted.                                                                      |

### Request

Parameter description



**Table 6-26** Parameters

| Parameter       | Mandator<br>y | Type    | Description                                                                          |
|-----------------|---------------|---------|--------------------------------------------------------------------------------------|
| is_force_delete | No            | Boolean | Specifies whether to forcibly delete a database. The default value is <b>false</b> . |

## 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 <b>successful</b> 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   | Mandator<br>y | 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 6-29** Parameters

| Parameter | Mandator<br>y | 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 <b>successful</b> if the invoking is successful, or returns <b>failed</b> 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |

| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>For details, see <a href="#">Table 6-38</a> .   |
| master_instance    | Object           | Indicates the primary instance information.<br>For details, see <a href="#">Table 6-39</a> . |
| readonly_instances | Array of objects | Indicates read replica information.<br>For details, see <a href="#">Table 6-40</a> .         |

**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: <ul style="list-style-type: none"><li>• <b>open</b></li><li>• <b>closed</b></li><li>• <b>frozen</b></li><li>• <b>opening</b></li><li>• <b>closing</b></li><li>• <b>freezing</b></li><li>• <b>unfreezing</b></li></ul> |
| 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: <ul style="list-style-type: none"><li>• <b>abnormal</b></li><li>• <b>normal</b></li><li>• <b>creating</b></li><li>• <b>deleted</b></li></ul>                                                                                      |
| 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.<br>For details, see <a href="#">Table 6-41</a> .                                                                                                                                                                                                                        |



| Parameter | Type   | Description                                                                   |
|-----------|--------|-------------------------------------------------------------------------------|
| mode      | String | Indicates the proxy in the primary/standby mode. The value can be <b>Ha</b> . |

**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 <a href="#">Table 6-42</a> . |
| 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 <a href="#">Table 6-42</a> . |
| 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.<br>The value can be either of the following: <ul style="list-style-type: none"> <li>• <b>master</b></li> <li>• <b>slave</b></li> </ul>                                                     |
| az_code     | String  | Indicates the AZ.                                                                                                                                                                                                         |
| status      | String  | Indicates the proxy node status. The value can be any of the following: <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>abnormal</b></li> <li>• <b>creating</b></li> <li>• <b>deleted</b></li> </ul> |
| frozen_flag | Integer | Indicates whether the proxy node is frozen. <ul style="list-style-type: none"> <li>• <b>0</b>: unfrozen.</li> <li>• <b>1</b>: frozen</li> <li>• <b>2</b>: deleted after being frozen.</li> </ul>                          |

**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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>For details, see <a href="#">Table 6-45</a> .       |

**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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> . |
| 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. <ul style="list-style-type: none"><li>• <b>true</b>: indicates that the change is delayed. It will be automatically performed in the maintenance window.</li><li>• <b>false</b>: indicates that the change is performed immediately.</li></ul> |

## 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.<br>To obtain the value, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                  |
| instance_id | Yes       | Instance ID.                                                                                                                                                                                                                                              |
| offset      | No        | Index offset. If <b>offset</b> is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is <b>0</b> 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 <b>100</b> . The value cannot be a negative number. The minimum value is <b>1</b> and the maximum value is <b>100</b> .                                                                             |

## Request

None

## Response

- Normal response

**Table 6-54** Parameters

| Parameter             | Type             | Description                                                                   |
|-----------------------|------------------|-------------------------------------------------------------------------------|
| compute_flavor_groups | Array of objects | Compute flavor list objects.<br>For details, see <a href="#">Table 6-55</a> . |

**Table 6-55** compute\_flavor\_groups element data structure description

| Parameter       | Type             | Description                                                                                                                      |
|-----------------|------------------|----------------------------------------------------------------------------------------------------------------------------------|
| group_type      | String           | Group type <ul style="list-style-type: none"><li>• <b>X86</b>: x86 architecture</li><li>• <b>ARM</b>: Arm architecture</li></ul> |
| compute_flavors | Array of objects | Compute flavor information<br>For details, see <a href="#">Table 6-56</a> .                                                      |

**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<br><br>(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<br>(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<br>(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.<br>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.<br>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.<br>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.<br>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.<br>The client should not repeat the request without modifications.                               |
| 404         | NotFound                      | The requested resource cannot be found.<br>The client should not repeat the request without modifications.                                                         |
| 405         | MethodNotAllowed              | The method specified in the request is not supported for the requested resource.<br>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.<br>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.<br><br>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.<br>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.<br>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"
 }
}
```

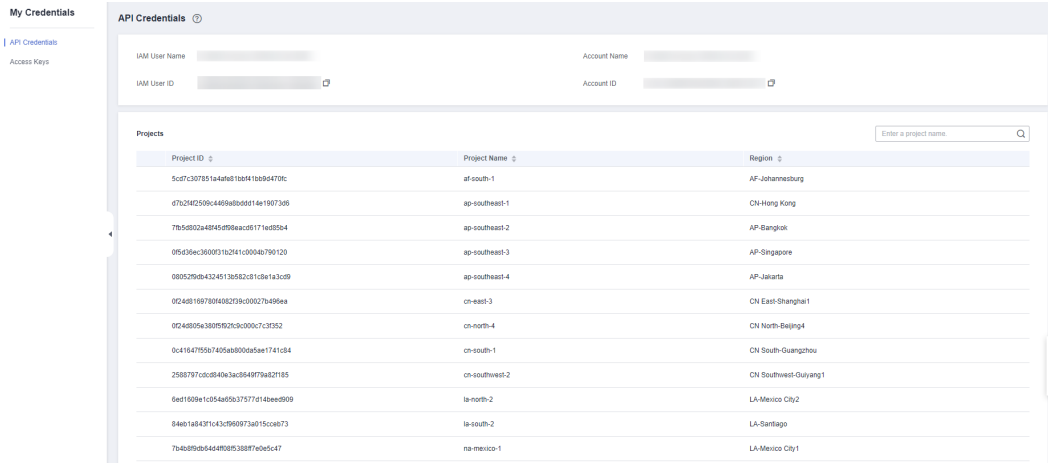
### Obtaining a Project ID from the Console

- 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<br>Monitored instance type: RDS for MySQL instance      |
| rds002_mem_util          | Memory Usage               | Memory usage of the monitored object                                         | 0–100%        | Monitored object: ECS<br>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 counts/s  | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance      |
| rds004_bytes_in          | Network Input Throughput   | Incoming traffic in bytes per second                                         | ≥ 0 bytes/s   | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance      |
| rds005_bytes_out         | Network Output Throughput  | Outgoing traffic in bytes per second                                         | ≥ 0 bytes/s   | Monitored object: ECS<br>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 counts    | Monitored object: database<br>Monitored instance type: RDS for MySQL instance |
| rds007_conn_active_count | Current Active Connections | Number of current active connections                                         | ≥ 0 counts    | Monitored object: database<br>Monitored instance type: RDS for MySQL instance |
| rds008_qps               | QPS                        | Query times of SQL statements (including stored procedures) per second       | ≥ 0 queries/s | Monitored object: database<br>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                 | $\geq 0$ transactions/s | Monitored object: database<br>Monitored instance type: RDS for MySQL instance |
| rds010_innodb_buf_usage   | Buffer Pool Usage             | Ratio of idle pages to the total number of buffer pool pages in the InnoDB buffer | 0–1                     | Monitored object: database<br>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                          | 0–1                     | Monitored object: database<br>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                            | 0–1                     | Monitored object: database<br>Monitored instance type: RDS for MySQL instance |
| rds013_innodb_read        | InnoDB Read Throughput        | Number of read bytes per second in the InnoDB buffer                              | $\geq 0$ bytes/s        | Monitored object: database<br>Monitored instance type: RDS for MySQL instance |
| rds014_innodb_write       | InnoDB Write Throughput       | Number of write bytes per second in the InnoDB buffer                             | $\geq 0$ bytes/s        | Monitored object: database<br>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                      | $\geq 0$ counts/s       | Monitored object: database<br>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                       | $\geq 0$ counts/s       | Monitored object: database<br>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                         | $\geq 0$ counts/s | Monitored object: database<br>Monitored instance type: RDS for MySQL instance |
| rds018_innodb_log_write_count     | InnoDB Log Physical Write Frequency  | Number of InnoDB physical write times to log files per second          | $\geq 0$ counts/s | Monitored object: database<br>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 | $\geq 0$ counts/s | Monitored object: database<br>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            | $\geq 0$ counts/s | Monitored object: database<br>Monitored instance type: RDS for MySQL instance |
| rds021_mysam_buf_usage            | Key Buffer Usage                     | MyISAM key buffer usage                                                | 0–1               | Monitored object: database<br>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<br>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<br>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           | $\geq 0$ counts/s  | Monitored object: database<br>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            | $\geq 0$ counts/s  | Monitored object: database<br>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 | $\geq 0$ counts/s  | Monitored object: database<br>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 | $\geq 0$ counts/s  | Monitored object: database<br>Monitored instance type: RDS for MySQL instance |
| rds028_command_delete_count        | DELETE Statements per Second                 | Number of DELETE statements executed per second                        | $\geq 0$ queries/s | Monitored object: database<br>Monitored instance type: RDS for MySQL instance |
| rds029_command_insert_count        | INSERT Statements per Second                 | Number of INSERT statements executed per second                        | $\geq 0$ queries/s | Monitored object: database<br>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                 | $\geq 0$ queries/s | Monitored object: database<br>Monitored instance type: RDS for MySQL instance |

| Metric ID                    | Name                                    | Description                                                | Value Range        | Monitored Object and Instance Type                                            |
|------------------------------|-----------------------------------------|------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------|
| rds031_comdml_rep_count      | REPLACE Statements per Second           | Number of REPLACE statements executed per second           | $\geq 0$ queries/s | Monitored object: database<br>Monitored instance type: RDS for MySQL instance |
| rds032_comdml_rep_sel_count  | REPLACE_SELECTION Statements per Second | Number of REPLACE_SELECTION statements executed per second | $\geq 0$ queries/s | Monitored object: database<br>Monitored instance type: RDS for MySQL instance |
| rds033_comdml_sel_count      | SELECT Statements per Second            | Number of SELECT statements executed per second            | $\geq 0$ queries/s | Monitored object: database<br>Monitored instance type: RDS for MySQL instance |
| rds034_comdml_upd_count      | UPDATE Statements per Second            | Number of UPDATE statements executed per second            | $\geq 0$ queries/s | Monitored object: database<br>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    | $\geq 0$ rows/s    | Monitored object: database<br>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   | $\geq 0$ rows/s    | Monitored object: database<br>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       | $\geq 0$ rows/s    | Monitored object: database<br>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                                                                                             | $\geq 0$ rows/s  | Monitored object: database<br>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<br>Monitored instance type: RDS for MySQL instance      |
| rds047_disk_total_size       | Total Storage Space       | Total storage space of the monitored object                                                                                                         | 40–4000, in GB   | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance      |
| rds048_disk_used_size        | Used Storage Space        | Used storage space of the monitored object                                                                                                          | 0–4000, in GB    | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance      |
| rds049_disk_read_throughput  | Disk Read Throughput      | Number of bytes read from the disk per second                                                                                                       | $\geq 0$ bytes/s | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance      |
| rds050_disk_write_throughput | Disk Write Throughput     | Number of bytes written into the disk per second                                                                                                    | $\geq 0$ bytes/s | Monitored object: ECS<br>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<br>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 | $\geq 0$ s       | Monitored object: ECS<br>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                                                            | $\geq 0$ s          | Monitored object: ECS<br>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 <b>long_query_time</b> . | $\geq 0$ counts/min | Monitored object: ECS<br>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                                                                                                                                        | $\geq 0$ ms         | Monitored object: ECS<br>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                                                                                                                                       | $\geq 0$ ms         | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance |
| rds077_vma                   | VMA                         | Virtual memory area size of an RDS process                                                                                                                                                            | $\geq 0$ counts     | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance |
| rds078_threads               | Threads                     | Number of threads in a process                                                                                                                                                                        | $\geq 0$ counts     | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance |
| rds079_vrm_hwm               | Peak Resident Set Size      | Peak physical memory usage of an RDS process                                                                                                                                                          | $\geq 0$ KB         | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance |
| rds080_vrm_peak              | Peak Virtual Memory Size    | Peak virtual memory usage of an RDS process                                                                                                                                                           | $\geq 0$ KB         | Monitored object: ECS<br>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<br>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<br>Monitored instance type: RDS for MySQL instance |
| sys_swap_usage                    | SWAP Usage                                          | SWAP usage of the monitored object                                                                                                                                                                                                                                            | 0–100%               | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance |
| rds_innodb_lock_waits             | Row Locks Waits Transactions                        | Number of InnoDB transactions waiting for row lock                                                                                                                                                                                                                            | $\geq 0$ counts      | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance |
| rds_bytes_recv_rate               | Received Bytes per Second                           | Number of bytes received by the database per second                                                                                                                                                                                                                           | $\geq 0$ bytes/s     | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance |
| rds_bytes_sent_rate               | Sent Bytes per Second                               | Number of bytes sent from the database per second                                                                                                                                                                                                                             | $\geq 0$ bytes/s     | Monitored object: ECS<br>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                                                                                                                                                                                                                                         | $\geq 0$ pages/s     | Monitored object: ECS<br>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                                  | $\geq 0$ pages/s  | Monitored object: ECS<br>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                                      | $\geq 0$ bytes/s  | Monitored object: ECS<br>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                     | $\geq 0$ counts/s | Monitored object: ECS<br>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                    | $\geq 0$ counts/s | Monitored object: ECS<br>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                      | $\geq 0$ counts/s | Monitored object: ECS<br>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 | $\geq 0$ counts/s | Monitored object: ECS<br>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                                                                                                   | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance |
| rds_wait_thread_count             | Waiting Threads                              | Total number of waiting threads in an instance.                                                                                                 | $\geq 0$ counts   | Monitored object: ECS<br>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                                                                                                    | $\geq 0$ counts   | Monitored object: ECS<br>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<br>Monitored instance type: RDS for MySQL instance |
| rds_innodb_row_lock_current_waits | Current Row Lock Waits                       | Number of current InnoDB row lock waits<br>This metric indicates the number of transactions that are currently waiting for row locks.           | $\geq 0$ counts   | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance |
| rds_mdllock_count                 | MDL Locks                                    | Number of MDL locks                                                                                                                             | $\geq 0$ counts   | Monitored object: ECS<br>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 | $\geq 0$ counts   | Monitored object: ECS<br>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<br>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<br><br>The value is an accumulated value and is incremented by 1 each time a wait occurs.       | ≥ 0 counts  | Monitored object: ECS<br>Monitored instance type: RDS for MySQL instance |
| rds_long_transaction       | Long Transaction        | Maximum duration for starting a transaction<br>A complete long transaction is counted only when the <b>BEGIN</b> and <b>COMMIT</b> commands exist before and after the related operation commands, respectively. | ≥ 0 seconds | Monitored object: ECS<br>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<br>Monitored instance type: RDS for PostgreSQL instance |
| rds002_mem_util        | Memory Usage              | Memory usage of the monitored object                                               | 0–100%       | Monitored object: ECS<br>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 counts/s | Monitored object: ECS<br>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 counts/s | Monitored object: ECS<br>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 counts/s | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| rds004_bytes_in        | Network Input Throughput  | Incoming traffic in bytes per second                                               | ≥ 0 bytes/s  | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| rds005_bytes_out       | Network Output Throughput | Outgoing traffic in bytes per second                                               | ≥ 0 bytes/s  | Monitored object: ECS<br>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<br>Monitored instance type: RDS for PostgreSQL instance |

| Metric ID                           | Name                         | Description                                                            | Value Range     | Monitored Object and Instance Type                                                 |
|-------------------------------------|------------------------------|------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------|
| rds040_transaction_logs_usage       | Transaction Logs Usage       | Storage space usage of transaction logs                                | $\geq 0$ MB     | Monitored object: database<br>Monitored instance type: RDS for PostgreSQL instance |
| rds041_replication_slot_usage       | Replication Slot Usage       | Storage space usage of replication slot files                          | $\geq 0$ MB     | Monitored object: database<br>Monitored instance type: RDS for PostgreSQL instance |
| rds042_database_connections         | Database Connections in Use  | Number of database connections in use                                  | $\geq 0$ counts | Monitored object: database<br>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                  | $\geq 0$ counts | Monitored object: database<br>Monitored instance type: RDS for PostgreSQL instance |
| rds044_transaction_logs_generations | Transaction Logs Generation  | Size of transaction logs generated per second                          | $\geq 0$ MB/s   | Monitored object: database<br>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 | $\geq 0$ MB     | Monitored object: database<br>Monitored instance type: RDS for PostgreSQL instance |
| rds046_replication_lag              | Replication Lag              | Replication lag                                                        | $\geq 0$ ms     | Monitored object: database<br>Monitored instance type: RDS for PostgreSQL instance |
| rds047_disk_total_size              | Total Storage Space          | Total storage space of the monitored object                            | 40–4000, in GB  | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance      |

| Metric ID                    | Name                               | Description                                                                                                      | Value Range       | Monitored Object and Instance Type                                            |
|------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------|
| rds048_disk_used_size        | Used Storage Space                 | Used storage space of the monitored object                                                                       | 0–4000, in GB     | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| rds049_disk_read_throughput  | Disk Read Throughput               | Number of bytes read from the disk per second                                                                    | $\geq 0$ bytes/s  | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| rds050_disk_write_throughput | Disk Write Throughput              | Number of bytes written into the disk per second                                                                 | $\geq 0$ bytes/s  | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| ds082_tps                    | TPS                                | Execution times of submitted and rollback transactions per second                                                | $\geq 0$ counts/s | Monitored object: ECS<br>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<br>Monitored instance type: RDS for PostgreSQL instance |
| row_per_second               | Operation Rows                     | Number of rows that are being inserted, deleted, updated, or queried                                             | $\geq 0$          | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| active_connections           | Active Connections                 | Number of active database connections                                                                            | $\geq 0$          | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| idle_transaction_connections | Idle Transaction Connections       | Number of idle transaction connections                                                                           | $\geq 0$          | Monitored object: ECS<br>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 | $\geq 0$ ms       | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |



| Metric ID                       | Name                                         | Description                                                                                                                                                                                                                                                                                                                                                        | Value Range   | Monitored Object and Instance Type                                            |
|---------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------|
| 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                                                                                                                                                                                                                            | $\geq 0$ ms   | Monitored object: ECS<br>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.<br><b>NOTE</b><br>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<br>Monitored instance type: RDS for PostgreSQL instance |
| lock_waiting_sessions           | Sessions Waiting for Locks                   | Number of blocked sessions                                                                                                                                                                                                                                                                                                                                         | $\geq 0$      | Monitored object: ECS<br>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                                                                                                                                                                                                                                                                                            | $\geq 0$ KB/s | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| swap_out_rate                   | Swap-Out Rate                                | Volume of data written from the memory to the swap partition per second                                                                                                                                                                                                                                                                                            | $\geq 0$ KB/s | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| swap_total_size                 | Total Swap Size                              | Total size of the swap partition                                                                                                                                                                                                                                                                                                                                   | $\geq 0$ MB   | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |

| Metric ID      | Name                            | Description                                                                                                              | Value Range | Monitored Object and Instance Type                                            |
|----------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------|
| swap_usage     | Swap Usage                      | Usage of the swap partition                                                                                              | 0–100%      | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| db_max_age     | Maximum Database Age            | Maximum age of the current database, which is the value of <b>max(age(datfrozenxid))</b> in the <b>pg_database</b> table | $\geq 0$    | Monitored object: ECS<br>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<br>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<br>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<br>Monitored instance type: RDS for PostgreSQL instance |
| io_read_delay  | Read I/O Latency                | Average latency (in milliseconds) of disks responding to read requests                                                   | $\geq 0$ ms | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| io_write_delay | Write I/O Latency               | Average latency (in milliseconds) of disks responding to write requests                                                  | $\geq 0$ ms | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |

| Metric ID                           | Name                                                                       | Description                                                                                                                                                     | Value Range | Monitored Object and Instance Type                                            |
|-------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------|
| 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                                                                                            | $\geq 0$    | Monitored object: ECS<br>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                                                                                            | $\geq 0$    | Monitored object: ECS<br>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                                                                                            | $\geq 0$    | Monitored object: ECS<br>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. | $\geq 0$    | Monitored object: ECS<br>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. <ul style="list-style-type: none"> <li>0: abnormal</li> <li>1: startup</li> <li>2: catchup</li> <li>3: streaming</li> <li>4: backup</li> <li>5: stopping</li> </ul> | $\geq 0$ counts  | Monitored object: ECS<br>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                                                                                                                                                                              | $\geq 0$ bytes/s | Monitored object: ECS<br>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                                                                                                                                                                                                                   | $\geq 0$ ms      | Monitored object: ECS<br>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<br>Monitored instance type: RDS for PostgreSQL instance      |
| inactive_logical_replication_slot     | Inactive Logical Replication Slots                           | Number of inactive logical replication slots                                                                                                                                                                                                                                        | $\geq 0$                                                                  | Monitored object: database<br>Monitored instance type: RDS for PostgreSQL instance |
| pgaudit_log_size                      | Audit Log Size                                               | Size of audit logs                                                                                                                                                                                                                                                                  | $\geq 0$ GB                                                               | Monitored object: database<br>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 <b>0</b> indicates abnormal stream replication; <b>1</b> indicates normal stream replication; and <b>2</b> means that this node is the primary node.<br><br>For this metric, the standby node also includes read replicas. | <ul style="list-style-type: none"> <li>0</li> <li>1</li> <li>2</li> </ul> | Monitored object: ECS<br>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                                                                                                                                                                                          | $\geq 0$ s                                                                | Monitored object: ECS<br>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                                                            | $\geq 0$ counts/min | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| temporary_files_generation_size     | Temporary File Size per Minute | Size of temporary files generated within 1 minute                                                              | $\geq 0$ bytes/min  | Monitored object: ECS<br>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                             | $\geq 0$ bytes      | Monitored object: ECS<br>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                                    | $\geq 0$ bytes      | Monitored object: ECS<br>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                                    | $\geq 0$ bytes      | Monitored object: ECS<br>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                                               | $\geq 0$ bytes      | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| data_disk_inode_used                | Inodes                         | Used data disk inodes                                                                                          | $\geq 0$ counts     | Monitored object: ECS<br>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)                      | $\geq 0$ counts     | Monitored object: ECS<br>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) | $\geq 0$ counts     | Monitored object: ECS<br>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                                                                                                                                    | $\geq 0$ GB | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| dbuser_password_deadline | The fastest expiration time for database users | Database user password expiration time minus current time<br><b>NOTE</b><br>If no password expiration time is set, this metric cannot be collected. | $\geq 0$ s  | Monitored object: ECS<br>Monitored instance type: RDS for PostgreSQL instance |
| sys_memory_hit_rate      | Memory Hit Rate                                | Memory hit rate                                                                                                                                     | $\geq 0\%$  | Monitored object: ECS<br>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-APIISVR25.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<br>Monitored instance type: RDS for SQL Server instance |
| rds002_mem_util | Memory Usage | Memory usage of the monitored object | 0–100%      | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |



| Metric ID                    | Name                      | Description                                                                  | Value Range       | Monitored Object and Instance Type                                            |
|------------------------------|---------------------------|------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------|
| rds003_iops                  | IOPS                      | Average number of I/O requests processed by the system in a specified period | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| rds004_bytes_in              | Network Input Throughput  | Incoming traffic in bytes per second                                         | $\geq 0$ bytes/s  | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| rds005_bytes_out             | Network Output Throughput | Outgoing traffic in bytes per second                                         | $\geq 0$ bytes/s  | Monitored object: ECS<br>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<br>Monitored instance type: RDS for SQL Server instance |
| rds047_disk_total_size       | Total Storage Space       | Total storage space of the monitored object                                  | 40–4000, in GB    | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| rds048_disk_used_size        | Used Storage Space        | Used storage space of the monitored object                                   | 0–4000, in GB     | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| rds049_disk_read_throughput  | Disk Read Throughput      | Number of bytes read from the disk per second                                | $\geq 0$ bytes/s  | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| rds050_disk_write_throughput | Disk Write Throughput     | Number of bytes written into the disk per second                             | $\geq 0$ bytes/s  | Monitored object: ECS<br>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                  | $\geq 0$ counts   | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |

| Metric ID                         | Name                          | Description                                                                                  | Value Range       | Monitored Object and Instance Type                                                 |
|-----------------------------------|-------------------------------|----------------------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------|
| rds054_db_connections_in_use      | Database Connections in Use   | Number of database connections in use                                                        | $\geq 0$ counts   | Monitored object: database<br>Monitored instance type: RDS for SQL Server instance |
| rds055_transactions_per_sec       | Transactions per Second       | Number of transactions started for the database per second                                   | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance      |
| rds056_batches_per_sec            | Batches per Second            | Number of Transact-SQL command batches received per second                                   | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance      |
| rds057_logins_per_sec             | Logins per Second             | Total number of logins started per second                                                    | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance      |
| rds058_logouts_per_sec            | Logouts per Second            | Total number of logouts started per second                                                   | $\geq 0$ counts/s | Monitored object: ECS<br>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<br>Monitored instance type: RDS for SQL Server instance      |
| rds060_sql_compilations_per_sec   | SQL Compilations per Second   | Number of SQL compilations per second                                                        | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance      |
| rds061_sql_recompilations_per_sec | SQL Recompilations per Second | Number of SQL recompilations per second                                                      | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance      |
| rds062_full_scans_per_sec         | Full Scans per Second         | Number of unrestricted full scans per second                                                 | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance      |

| Metric ID                       | Name                        | Description                                                                                                                   | Value Range       | Monitored Object and Instance Type                                            |
|---------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------|
| rds063_errors_per_sec           | Errors per Second           | Number of errors per second                                                                                                   | $\geq 0$ counts/s | Monitored object: ECS<br>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                                                               | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| rds065_lock_waits_per_sec       | Lock Waits per Second       | Number of lock wait requests per second                                                                                       | $\geq 0$ counts/s | Monitored object: ECS<br>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                                           | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| rds067_timeouts_per_sec         | Lock Timeouts per Second    | Number of lock timeouts per second                                                                                            | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| rds068_avg_lock_wait_time       | Average Lock Wait Time      | Average wait time (ms) of lock requests                                                                                       | $\geq 0$ ms       | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| rds069_deadlocks_per_sec        | Deadlocks per Second        | Number of deadlocks per second                                                                                                | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| 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 | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |

| Metric ID                       | Name                      | Description                                                                                                                                                                                                                                                                                                                                 | Value Range       | Monitored Object and Instance Type                                            |
|---------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------|
| 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). | $\geq 0$ s        | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| mssql_memory_grants_pending     | Memory Grants Pending     | Total number of processes waiting for a workspace memory grant                                                                                                                                                                                                                                                                              | $\geq 0$ counts   | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| mssql_lazy_write_per_sec        | Lazy Writes per Second    | Number of lazy writes per second                                                                                                                                                                                                                                                                                                            | $\geq 0$ counts/s | Monitored object: ECS<br>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                                                                                                                                                                                                                                                                    | $\geq 0$ s        | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| mssql_page_reads_per_sec        | Page Reads per Second     | Number of page reads per second                                                                                                                                                                                                                                                                                                             | $\geq 0$ counts/s | Monitored object: ECS<br>Monitored instance type: RDS for SQL Server instance |
| mssql_tempdb_disk_size          | Temporary Tablespace Size | Disk space occupied by the current temporary tablespace                                                                                                                                                                                                                                                                                     | $\geq 0$ MB       | Monitored object: ECS<br>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 <b>Max Worker Threads</b>                                                                                                                                                                                                                                                                 | 0–100%            | Monitored object: ECS<br>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.<br><br>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](#)