

Relational Database Service

API Reference

Issue 01
Date 2025-10-28



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1 Before You Start

1.1 Overview

Welcome to Relational Database Service (RDS). RDS is an online relational database service running on a cloud computing platform. RDS is reliable, scalable, and easy to manage. RDS includes a comprehensive performance monitoring system, multi-level security measures, and a professional database management platform, allowing you to easily set up and scale up 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

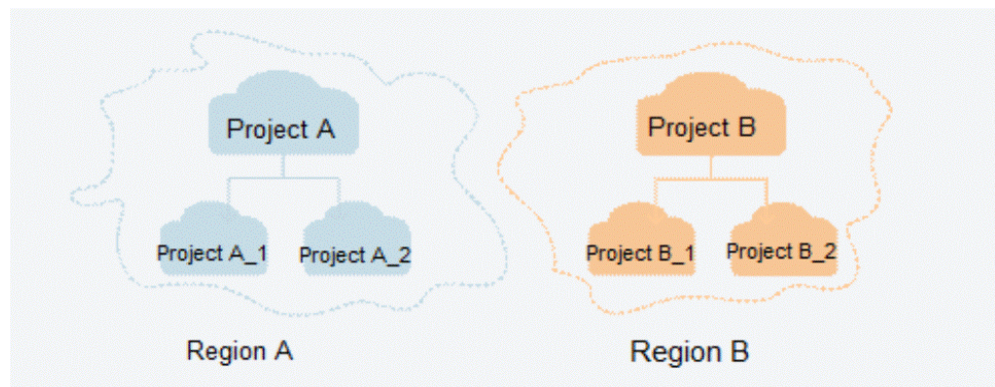
- The number of RDS DB instances that you can create is determined by your quota. To view or increase the quota, see "Managing Quotas" in the *Relational Database Service User Guide*.

- 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 their 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. 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.

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)	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)	DB Instance Management	Manage DB instances, including creating a DB instance, adjusting instance storage space, rebooting a DB instance, deleting a DB instance, obtaining a DB instance list, and obtaining detailed information of a specified DB instance.
RDS APIs (v3)	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 creating a manual backup, and deleting a manual backup.

Type	Subtype	Description
RDS APIs (v3)	Log Information Queries	Obtain log information, including querying database error logs and querying database slow logs.
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.
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)	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)	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 the administrator.
resource-path	Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the resource-path of the API used to obtain a user token is /v3/auth/tokens .
query-string	Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of "Parameter name=Parameter value". For example, ?limit=10 indicates that a maximum of 10 data records will be displayed.

 **NOTE**

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

Request Methods

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

Table 3-2 HTTP methods

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

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://{{Endpoint}}/v3/auth/tokens
```

Request Header

You can also add additional fields to a request, such as the fields required by a specified URI or an HTTP method. For example, to request for the authentication information, add **Content-Type**, which specifies the request body type.

Table 3-3 lists common request header fields.

Table 3-3 Common request headers

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

Name	Description	Mandatory	Example
X-Auth-Token	<p>Specifies the user token.</p> <p>The user token is a response to the API used to obtain a user token. This API is the only one that does not require authentication.</p> <p>After the request is processed, the value of X-Subject-Token in the message header is the token value.</p>	<p>No</p> <p>This parameter is mandatory for token authentication.</p>	<p>The following is part of an example token:</p> <p>MIIPAgYJKoZIhvcNAQc-Co...ggg1BBIINPXsidG9rZ</p>
X-Language	<p>Specifies the request language type. The default value is en-us.</p> <p>Range</p> <ul style="list-style-type: none"> en-us zh-cn 	No	en-us

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

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

(Optional) Request Body

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

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

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

 NOTE

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

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

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

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

3.2 Authentication

Token authentication must be performed to call APIs.

Authentication using tokens: General requests are authenticated using tokens.

Token-based Authentication

 NOTE

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

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

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
```

```

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

```

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

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

```

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

```

3.3 Response

Status Code

After sending a request, you will receive a response, including the status code, response header, and response body.

A status code is a group of digits ranging from 1xx to 5xx. It indicates the status of a response. For more information, see [Status Codes](#).

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

Response Header

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

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

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

```

connection → keep-alive

content-type → application/json

date → Tue, 12 Feb 2019 06:52:13 GMT

server → Web Server

strict-transport-security → max-age=31536000; includeSubdomains;

transfer-encoding → chunked

via → proxy A

x-content-type-options → nosniff

x-download-options → noopen

x-frame-options → SAMEORIGIN

x-iam-trace-id → 218d45ab-d674-4995-af3a-2d0255ba41b5

x-subject-token
→ MIIYXQYJKoZIhvcNAQcCoIIYTCCEGoCAQExDTALBglghkgBZQMEAgEwgharBgkqhkiG9w0BBwGgghacBIIWmHsidG9rZW4iOensiZXhwaXJlc19hdCI6IiwMTktMDItMTNUMC
fj3Kjs6YgKnpVNRbW2eZ5eb78SZOkajACgkIQ01wi4JIGzrpd18LGXK5bdfq4lqHCYb8P4NaYONYeJcAgz/VeFYtLWT1GSO0zxKZmlQHq82HBqHdgIZO9fuEbl5dMhdavj+33wEI
xHRCE9I87o+k9-
j+CMZSEB7bUGd5Uj6eRASXl1jipPEGA270g1FruooL6jggIFkNPQuFSOU8+uSsttVwRtnfsC+qTp22Rkd5MCqFGQ8LcuXc3a+9CMBnOintWW7oeRUUVhVpxk8pxiX1wTEboX-
RzT6MUbpvGw-oPNFYxJECKnoH3HRozv0vN--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 (Recommended)

4.1 Querying Version Information About APIs

4.1.1 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 /rds
- Parameter description
None

Request

- Request parameters
None

Response

- Normal response

Table 4-1 Parameters

Parameter	Type	Description
versions	Array of objects	Indicates the list of detailed API version information. For details, see Table 4-2 .

Table 4-2 versions field data structure description

Parameter	Type	Description
id	String	Indicates the API version. <ul style="list-style-type: none"> v3: indicates the API v3 version.
links	Array of objects	Indicates the API link information. The value is empty when the version is v3. For details, see Table 4-3 .
status	String	Indicates the version status. <ul style="list-style-type: none"> CURRENT: indicates that the version is recommended.
updated	String	Indicates the version update time in the "yyyy-mm-dd Thh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the Coordinated Universal Time (UTC).

Table 4-3 links field data structure description

Parameter	Type	Description
href	String	Indicates the API URL and the value is "".
rel	String	Its value is self , indicating that href is a local link.

- Example normal response

```
{
  "versions": [{
    "id": "v3",
    "links": [],
    "status": "CURRENT",
    "updated": "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](#).

4.1.2 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 4-4 Parameters

Parameter	Mandatory	Description
version	Yes	<p>Definition API version.</p> <p>Constraints N/A</p> <p>Range The value is case-sensitive. For details, see id in Table 4-2 in section Querying API Versions.</p> <p>Default Value N/A</p>

Request

- Request parameters
None

Response

- Normal response

Table 4-5 Parameters

Parameter	Type	Description
versions	Object	<p>Definition API version details. For details, see Table 4-6.</p>
version	Object	<p>Definition API version details. For details, see Table 4-6.</p>

Table 4-6 versions field data structure description

Parameter	Type	Description
id	String	<p>Definition API version.</p> <p>Range N/A</p>

Parameter	Type	Description
links	Array	Definition API version link information. Its value is empty. For details, see Table 4-7 .
status	String	Definition Version status. Range N/A
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 4-7 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": "v3",
    "links": [],
    "status": "CURRENT",
    "updated": "2017-02-07T17:34:02Z"
  },
}
```

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

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

Status Code

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

Error Code

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

4.2 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 4-8 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>
database_name	Yes	<p>Definition DB engine.</p> <p>Constraints N/A</p> <p>Range The value can be any of the following and is case-insensitive:</p> <ul style="list-style-type: none"> • MySQL • PostgreSQL • SQLServer <p>Default Value N/A</p>

Request

- Request parameters
None

Response

- Normal response

Table 4-9 Parameters

Parameter	Type	Description
dataStores	Array of objects	<p>Definition Database versions. For details, see Table 4-10.</p>

Table 4-10 dataStores field data structure description

Parameter	Type	Description
id	String	<p>Definition Database version ID. The value is unique.</p> <p>Range N/A</p>
name	String	<p>Definition Database version number. Only the major version number (two digits) is returned. For example, if the version number is MySQL 5.7.X, only 5.7 is returned.</p> <p>Range</p>

- Example normal response

```
{
  "dataStores": [{
    "id": "87620726-6802-46c0-9028-a8785e1f1921",
    "name": "8.0"
  }, {
    "id": "87620726-6802-46c0-9028-a8785e1f1922",
    "name": "5.7"
  }
]
```

- 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](#).

4.3 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}
- Parameter description

Table 4-11 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>
database_name	Yes	<p>Definition DB engine name.</p> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> • MySQL • PostgreSQL • SQLServer <p>Default Value N/A</p>
version_name	No	<p>Definition Database version. For details about how to obtain the database version, see section Querying Version Information About a DB Engine.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>

Parameter	Mandatory	Description
spec_code	No	Definition Specification code.

Request

- Request parameters
None

Response

- Normal response

Table 4-12 Parameters

Parameter	Type	Description
flavors	Array of objects	Definition Indicates the DB instance specifications information list. For details, see Table 4-13 .

Table 4-13 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	<p>Definition Indicates the resource specification code. Use rds.mysql.m1.xlarge.rr as an example.</p> <ul style="list-style-type: none"> • rds: indicates the RDS product. • mysql: indicates the DB engine. • m1.xlarge: indicates the high memory performance specifications. • rr: indicates read replicas (.ha indicates primary/standby DB instances). <p>Range N/A</p>
version_name	Array	<p>Definition Indicates the database version.</p>
instance_mode	String	<p>Definition Indicates the instance type.</p> <p>Range</p> <ul style="list-style-type: none"> • ha: indicates primary/standby instances. • replica: indicates read replicas. • single: indicates single DB instances.
az_status	Map<String, String>	<p>Definition Indicates the specification status in an AZ.</p> <p>Range</p> <ul style="list-style-type: none"> • 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.
az_desc	Map<String, String>	<p>Definition Indicates the description of the AZ to which the specifications belong.</p> <p>Range N/A</p>

Parameter	Type	Description
group_type	String	<p>Definition Indicates instance specifications.</p> <p>Range</p> <ul style="list-style-type: none"> ● general: general-purpose ● dedicated: dedicated ● 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.ha",
    "version_name": ["5.7", "8.0"],
    "instance_mode": "ha",
    "az_status": {
      "az1": "normal"
    },
    "az_desc": {
      "az1": "az1"
    },
    "group_type": "general"
  },
  {
    "vcpus": "1",
    "ram": 2,
    "id": "2988b9cc-2aac-3a94-898c-14666702f130",
    "spec_code": "rds.mysql.c2.medium.rr",
    "version_name": ["5.7", "8.0"],
    "instance_mode": "replica",
    "az_status": {
      "az1": "normal"
    },
    "az_desc": {
      "az1": "az1"
    },
    "group_type": "general"
  }
  ]
}
```

- Abnormal 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 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 4-14 Parameters

Parameter	Mandatory	Description
project_id	Yes	<p>Definition Project ID of a tenant in a region. To obtain the value, see Obtaining a Project ID.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>
database_name	Yes	<p>Definition DB engine.</p> <p>Constraints N/A</p> <p>Range The value can be any of the following and is case-insensitive:</p> <ul style="list-style-type: none"> • MySQL • PostgreSQL • SQLServer <p>Default Value N/A</p>

Parameter	Mandatory	Description
version_name	Yes	<p>Definition DB engine version.</p> <p>Constraints N/A</p> <p>Range For details about how to obtain the DB engine version, see Querying Version Information About a DB Engine.</p> <p>Default Value N/A</p>
ha_mode	No	<p>Definition Primary/standby mode.</p> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> • single • ha • replica <p>Default Value N/A</p>

Request

- Request parameters
None

Response

- Normal response

Table 4-15 Parameters

Parameter	Type	Description
storage_type	Array of objects	<p>Definition Instance specifications. For details, see Table 4-16.</p>
dsspool_info	Array of objects	<p>Definition DSS pool specifications. For details, see Table 4-17.</p> <p>NOTE Only Dedicated Cloud (DeC) users are supported.</p>

Table 4-16 storage_type field data structure description

Parameter	Type	Description
name	String	<p>Definition Storage type.</p> <p>Range</p> <ul style="list-style-type: none"> ● ULTRAHIGH: ultra-high I/O storage. ● CLOUDSSD: cloud SSD storage. ● ESSD: extreme SSD storage.
az_status	Map<String, String>	<p>Definition Specification status in an AZ.</p> <p>Range</p> <ul style="list-style-type: none"> ● 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>	<p>Definition Instance specifications.</p> <p>Range</p> <ul style="list-style-type: none"> ● normal2: general-enhanced II ● general: general-purpose ● dedicated: dedicated

Table 4-17 dsppool_info field data structure description

Parameter	Type	Description
az_name	String	<p>Definition Name of the AZ where the DSS pool is located.</p> <p>Range N/A</p>
free_capacity_gb	String	<p>Definition Available capacity of the DSS pool.</p> <p>Range N/A</p>

Parameter	Type	Description
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 <ul style="list-style-type: none"> • available • deploying • enlarging • frozen • sellout

- Example normal response

```

{
  "storage_type": [{
    "name": "COMMON",
    "az_status": {
      "az1": "normal",
      "az2": "normal"
    }
  },
  {
    "name": "ULTRAHIGH",
    "az_status": {
      "az1": "normal",
      "az2": "normal"
    }
  }
],
  "dsspool_info": []
}
{
  "storage_type": [{
    "name": "CLOUDSSD",
    "az_status": {
      "az1": "normal"
    },
    "support_compute_group_type": [
      "dedicated"
    ]
  }
],
  "dsspool_info": []
}

```

- Abnormal 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 DB Instance Management

4.5.1 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](#).

URI

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

Table 4-18 Parameters

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

Request

Table 4-19 Parameters (creating single-node, primary/standby, and cluster instances, except RDS for SQL Server instances configured with the AD domain)

Parameter	Mandatory	Type	Description
name	Yes	String	<p>Definition Specifies the DB instance name. Instances of the same type can have the same name under the same tenant.</p> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> • RDS for MySQL: The DB instance name must be 4 to 64 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 long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), and underscores (_). <p>Default Value N/A</p>
datastore	Yes	Object	<p>Definition Specifies the database information. For details, see Table 4-21.</p> <p>Constraints N/A</p>

Parameter	Mandatory	Type	Description
flavor_ref	Yes	String	<p>Definition Specifies the specification code.</p> <p>Constraints N/A</p> <p>Range The value cannot be empty. For details, see spec_code in Table 4-13 in section Querying Database Specifications.</p> <p>Default Value N/A</p>
volume	Yes	Object	<p>Definition Specifies instance storage. For details, see Table 4-24.</p> <p>Constraints N/A</p>
region	Yes	String	<p>Definition Specifies the region ID.</p> <p>Constraints N/A</p> <p>Range</p> <p>Default Value N/A</p>

Parameter	Mandatory	Type	Description
availability_zone	Yes	String	<p>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.</p> <p>Constraints N/A</p> <p>Range</p> <p>Default Value N/A</p>
vpc_id	Yes	String	<p>Definition Specifies the VPC ID.</p> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> 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>. <p>Default Value N/A</p>

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

Parameter	Mandatory	Type	Description
security_group_id	Yes	String	<p>Definition</p> <p>Specifies the security group which the RDS DB instance belongs to. To obtain this parameter value, use either of the following methods:</p> <p>Constraints</p> <p>N/A</p> <p>Range</p> <ul style="list-style-type: none"> Method 1: Log in to VPC console. Choose Access Control > Security Groups in the navigation pane on the left. On the displayed page, click the target security group. You can view the security group ID on the displayed page. Method 2: See the "Querying Security Groups" section in the <i>Virtual Private Cloud API Reference</i>. <p>Default Value</p> <p>N/A</p>
ha	No	Object	<p>Definition</p> <p>Specifies the HA configuration, which is used when you create primary/standby instances.</p> <p>For details, see Table 4-22.</p> <p>Constraints</p> <p>N/A</p>

Parameter	Mandatory	Type	Description
configuration_id	No	String	<p>Definition Specifies the parameter template ID.</p> <p>Constraints N/A</p> <p>Range For details, see id in Table 4-232 in section Obtaining a Parameter Template List.</p> <p>Default Value N/A</p>
port	No	String	<p>Definition Specifies the database port information.</p> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> • RDS for MySQL instances can use database ports 1024 to 65535, excluding 12017 and 33071, which are reserved for RDS system use. • RDS for PostgreSQL instances can use database ports 2100 to 9500. <p>Default Value If this parameter is not set, the default value is as follows:</p> <ul style="list-style-type: none"> • RDS for MySQL: 3306 • RDS for PostgreSQL: 5432 • RDS for SQL Server: 1433

Parameter	Mandatory	Type	Description
password	No	String	<p>Definition Specifies the database password.</p> <p>Constraints N/A</p> <p>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.</p> <ul style="list-style-type: none"> • RDS for MySQL: ~!@#%&^*_-=+?,()& • RDS for SQL Server: ~!@#%&^*_-=+?, • RDS for PostgreSQL: ~!@#%&^*_-=+?, <p>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking. If the password you provide is regarded as a weak password by the system, you will be prompted to enter a stronger password.</p> <p>Default Value N/A</p>
backup_strategy	No	Object	<p>Definition Specifies the advanced backup policy. For details, see Table 4-23.</p> <p>Constraints N/A</p>

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	<p>Definition Specifies the enterprise project ID.</p> <p>Constraints N/A</p> <p>Range</p> <p>Default Value N/A</p>
disk_encryption_id	No	String	<p>Definition Specifies the ID of the key used for disk encryption.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value This parameter is left blank by default.</p>

Parameter	Mandatory	Type	Description
data_vip	No	String	<p>Definition Specifies the floating IP address of a DB instance.</p> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> Method 1: Log in to the VPC console and click the target subnet on the Subnets page. View the subnet CIDR block and select an IP address that is not in use. Method 2: See the "Querying Subnets" section in the <i>Virtual Private Cloud API Reference</i>. <p>Default Value This parameter is left blank by default.</p>
time_zone	No	String	<p>Definition Specifies the UTC time zone.</p> <p>Constraints N/A</p> <p>Range</p> <p>Default Value If this parameter is not specified, the time zone of each engine is as follows:</p> <ul style="list-style-type: none"> MySQL: uses UTC by default. PostgreSQL: uses UTC by default.

Parameter	Mandatory	Type	Description
restore_point	No	Object	<p>Definition</p> <p>Specifies the restoration information. This parameter is mandatory when data is restored to a new instance.</p> <p>For details, see Table 4-27.</p> <p>Constraints</p> <p>N/A</p>
tags	No	Array of objects	<p>Definition</p> <p>Specifies the tag list. DB instances are created based on tag keys and values.</p> <ul style="list-style-type: none"> • <i>{key}</i> indicates the tag key. It must be unique and cannot be empty. • <i>{value}</i> indicates the tag value, which can be empty. <p>If you want to create DB instances with multiple tag key-value pairs, separate them with commas (,). A maximum of 20 key-value pairs can be added.</p> <p>For details, see Table 4-26.</p> <p>Constraints</p> <p>N/A</p>

Parameter	Mandatory	Type	Description
collation	No	String	<p>Definition Specifies the collation of an RDS for SQL Server instance.</p> <p>Constraints This parameter applies only to RDS for SQL Server DB instances.</p> <p>Range For details, see Querying the Available SQL Server Character Set.</p> <p>Default Value N/A</p>
count	No	Integer	<p>Definition Specifies the number of DB instances to be created in a batch.</p> <p>Constraints This parameter is unavailable when you create read replicas.</p> <p>Range 1-50</p> <p>Default Value N/A</p>

Table 4-20 Parameters for creating read replicas

Parameter	Mandatory	Type	Description
name	Yes	String	<p>Definition Specifies the DB instance name. The DB instance name of the same type must be unique for the same tenant.</p> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> • RDS for MySQL: The DB instance name must be 4 to 64 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 long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), and underscores (_). <p>Default Value N/A</p>
flavor_ref	Yes	String	<p>Definition Specifies the specification code.</p> <p>Constraints N/A</p> <p>Range The value cannot be empty. For details, see spec_code in Table 4-13 in section Querying Database Specifications.</p> <p>Default Value N/A</p>

Parameter	Mandatory	Type	Description
volume	Yes	Object	<p>Definition Specifies the volume information. For details, see Table 4-24.</p> <p>Constraints N/A</p>
availability_zone	Yes	String	<p>Definition Specifies the AZ ID.</p> <p>Constraints N/A</p> <p>Range Default Value N/A</p>
disk_encryption_id	No	String	<p>Definition Specifies the ID of the key used for disk encryption.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value This parameter is left blank by default.</p>
region	No	String	<p>Definition Specifies the region ID.</p> <p>Constraints Currently, read replicas can be created only in the same region as that of the primary DB instance.</p> <p>Range Default Value N/A</p>

Parameter	Mandatory	Type	Description
charge_info	No	Object	<p>Definition Specifies the billing information. For details, see Table 4-25.</p> <p>Constraints In the EU-Dublin region, both yearly/monthly and pay-per-use billing modes are available. In other regions, only pay-per-use billing is available. RDS for SQL Server does not support yearly/monthly read replicas.</p>

Table 4-21 datastore field data structure description

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

Parameter	Mandatory	Type	Description
version	Yes	String	<p>Definition Specifies the database version.</p> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> For RDS for MySQL, 5.7 and 8.0 are supported. Example value: 5.7 For RDS for PostgreSQL, 9.5, 9.6, 10, 11, 12, 13, 14, and 15 are supported. Example value: 9.6 <p>For details about supported database versions, see section Querying Version Information About a DB Engine.</p> <p>Default Value N/A</p>
complete_version	No	String	<p>Definition Specifies the complete version number.</p> <p>Constraints This parameter is returned only when the DB engine is PostgreSQL.</p> <p>Range N/A</p> <p>Default Value N/A</p>

Table 4-22 ha field data structure description

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

Table 4-23 backup_strategy field data structure description

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

Parameter	Mandatory	Type	Description
keep_days	No	Integer	<p>Definition Specifies the retention days for specific backup files.</p> <p>Constraints The automated backup policy cannot be disabled for primary/standby DB instances of RDS for SQL Server.</p> <p>Range 0-732 If this parameter is not specified or set to 0, the automated backup policy is disabled.</p> <p>Default Value N/A</p>

Table 4-24 volume field data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	<p>Definition Specifies the storage type.</p> <p>Constraints N/A</p> <p>Range Its value can be any of the following and is case-sensitive:</p> <ul style="list-style-type: none"> • ULTRAHIGH: ultra-high I/O storage. • CLOUDSSD: cloud SSD storage. • ESSD: extreme SSD storage. <p>Default Value N/A</p>

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

Table 4-25 charge_info field data structure description

Parameter	Mandatory	Type	Description
charge_mode	Yes	String	<p>Definition Specifies the billing mode.</p> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> • prePaid: indicates the yearly/monthly billing mode. • postPaid: indicates the pay-per-use billing mode. <p>Default Value N/A</p>

Parameter	Mandatory	Type	Description
period_type	No	String	<p>Definition Specifies the subscription type.</p> <p>Constraints This parameter is valid and mandatory if charge_mode is set to prePaid.</p> <p>Range</p> <ul style="list-style-type: none"> • month: indicates that the subscription unit is month. • year: indicates that the subscription unit is year. <p>Default Value N/A</p>
period_num	No	Integer	<p>Definition Specifies the subscription period.</p> <p>Constraints This parameter is valid and mandatory if charge_mode is set to prePaid.</p> <p>Range</p> <ul style="list-style-type: none"> • 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 is 1. <p>Default Value N/A</p>

Parameter	Mandatory	Type	Description
is_auto_renew	No	boolean	<p>Definition 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> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> • true: Automatic renewal is enabled. • false: Automatic renewal is disabled. <p>Default Value false</p>
is_auto_pay	No	boolean	<p>Definition 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> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> • true: The order will be automatically paid. • false: The order will be manually paid. <p>Default Value false</p>

Table 4-26 tags field data structure description

Parameter	Mandatory	Type	Description
key	Yes	String	<p>Definition Specifies the tag key.</p> <p>Constraints N/A</p> <p>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>.</p> <p>Default Value N/A</p>
value	Yes	String	<p>Definition Specifies the tag value.</p> <p>Constraints N/A</p> <p>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>.</p> <p>Default Value N/A</p>

Table 4-27 restore_point field data structure description

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

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

Parameter	Mandatory	Type	Description
database_name	No	Map<String,String>	<p>Definition Specifies the database name.</p> <p>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.</p> <p>Range</p> <ul style="list-style-type: none"> 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. <p>Default Value N/A</p>

Example Request

- Create an RDS for MySQL single-node instance.

```
{
  "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": "aaa",
"availability_zone": "bbb",
"vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
"subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
"data_vip": "192.168.0.1",
"security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
"port": 8635,
"backup_strategy": {
  "start_time": "08:15-09:15",
  "keep_days": 12
},
"charge_info": {
  "charge_mode": "postPaid"
},
"password": "*****",
"configuration_id": "452408-ef4b-44c5-94be-305145fg"
"time_zone": "UTC+04:00"
}

```

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

```

- 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": "aaa",
  "availability_zone": "bbb"
}

```

Response

- Normal response

Table 4-28 Parameters

Parameter	Type	Description
instance	Object	Definition Indicates the DB instance information. For details, see Table 4-29 .
job_id	String	Definition Indicates the ID of the DB instance creation task. Range N/A
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 4-29 instance field data structure description

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

Parameter	Type	Description
name	String	<p>Definition Indicates the DB instance name. DB instances of the same type can have same names under the same tenant.</p> <p>Range N/A</p>
status	String	<p>Definition Indicates the DB instance status.</p> <p>Range For example, BUILD indicates that the DB instance is being created.</p>
datastore	Object	<p>Definition Indicates the database information.</p> <p>For details, see Table 4-30.</p>
ha	Object	<p>Definition Indicates the HA configuration parameters. This parameter is returned only when primary/standby DB instances are created.</p> <p>For details, see Table 4-31.</p>
configuration_id	String	<p>Definition Indicates the parameter template ID. This parameter is returned only when a custom parameter template is used during DB instance creation.</p> <p>Range N/A</p>

Parameter	Type	Description
port	String	<p>Definition Indicates the database port.</p> <p>Range Same as the request parameter.</p>
backup_strategy	Object	<p>Definition Indicates the automated backup policy. For details, see Table 4-32.</p>
enterprise_project_id	String	<p>Definition Indicates the project ID.</p> <p>Range N/A</p>
disk_encryption_id	String	<p>Definition Indicates the ID of the key used for disk encryption.</p> <p>Range This parameter is available only when you specify this parameter during instance creation. By default, this parameter is left blank.</p>
flavor_ref	String	<p>Definition Indicates the specification code.</p> <p>Range The value cannot be empty. For details, see spec_code in Table 4-13 in section Querying Database Specifications.</p>

Parameter	Type	Description
volume	Object	<p>Definition Indicates the volume information. For details, see Table 4-33.</p>
region	String	<p>Definition Indicates the region ID.</p> <p>Range N/A</p>
availability_zone	String	<p>Definition Indicates the AZ ID.</p> <p>Range N/A</p>
vpc_id	String	<p>Definition Indicates the VPC ID.</p> <p>Range</p> <ul style="list-style-type: none"> 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	<p>Definition Indicates the network ID of the subnet.</p> <p>Range</p> <ul style="list-style-type: none"> Method 1: Log in to the VPC console and click the target subnet on the Subnets page. You can view the network ID on the displayed page. Method 2: See the "Querying Subnets" section in the <i>Virtual Private Cloud API Reference</i>.

Parameter	Type	Description
security_group_id	String	<p>Definition</p> <p>Indicates the security group which the RDS DB instance belongs to. To obtain this parameter value, use either of the following methods:</p> <p>Range</p> <ul style="list-style-type: none"> Method 1: Log in to VPC console. Choose Access Control > Security Groups in the navigation pane. On the 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	<p>Definition</p> <p>Indicates the billing information.</p> <p>For details, see Table 4-34.</p>
collation	String	<p>Definition</p> <p>Indicates the collation set for RDS for SQL Server.</p> <p>Range</p> <p>N/A</p>

Parameter	Type	Description
restore_point	Object	<p>Definition Indicates the restoration information. This parameter is mandatory when data is restored to a new instance.</p> <p>For details, see Table 4-35.</p>

Table 4-30 datastore field data structure description

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

Table 4-31 ha field data structure description

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

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

Table 4-32 backupStrategy field data structure description

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

Parameter	Type	Description
keep_days	Integer	<p>Definition Indicates the retention days for specific backup files.</p> <p>Range 0-732 If this parameter is not specified or set to 0, the automated backup policy is disabled.</p> <p>If backup_strategy in the request body is empty, 7 is returned for keep_days by default.</p>

Table 4-33 volume field data structure description

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

Table 4-34 chargeInfo field data structure description

Parameter	Type	Description
charge_mode	String	<p>Definition Indicates the billing information.</p> <p>Range N/A</p>

Parameter	Type	Description
period_num	Integer	<p>Definition Indicates the subscription period, which is calculated by month.</p> <p>This parameter is valid when charge_mode is set to prePaid (creating yearly/monthly DB instances).</p> <p>Range N/A</p>

Table 4-35 restore_point field data structure description

Parameter	Type	Description
instance_id	String	<p>Definition Specifies the source instance ID.</p> <p>Range N/A</p>
type	String	<p>Definition Specifies the restoration mode.</p> <p>Range</p> <ul style="list-style-type: none"> • backup: Data is restored using backups. • timestamp: Data is restored to a point in time.
backup_id	String	<p>Definition Specifies the ID of the backup to be restored.</p> <p>Range N/A</p>
restore_time	Integer	<p>Definition Specifies the time point of data restoration in the UNIX timestamp. The unit is millisecond and the time zone is UTC.</p> <p>Range N/A</p>

Parameter	Type	Description
database_name	Map<String,String>	<p>Definition</p> <p>This parameter is supported only for Microsoft SQL Server databases. If this parameter is specified, you can restore specific databases and rename new databases.</p> <p>Range</p> <p>N/A</p>

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

RDS for MySQL primary/standby instance created.

```
{
  "instance": {
    "id": "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": "aaa",
    "availability_zone": "bbb,ccc",
    "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": "dsfae23fsfdae3435in01",
    "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": "aaa",
    "availability_zone": "bbb",
    "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](#).

4.5.2 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

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

URI

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

Table 4-36 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.

```
{}
```

Response

- Normal response

Table 4-37 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](#).

4.5.3 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 4-38 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 4-39 Parameter description

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

Example Request

Change the name of a DB instance.

```
{
  "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](#).

4.5.4 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 4-40 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.

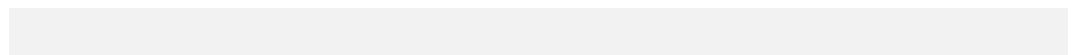
Request

Table 4-41 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.



```
{
  "alias": "alias-test"
}
```

Response

- Normal response

Table 4-42 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](#).

4.5.5 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 4-43 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 4-44 Parameters

Parameter	Mandatory	Type	Description
resize_flavor	Yes	Object	For details, see Table 4-45 .

Table 4-45 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.

Example Request

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

```
{
  "resize_flavor": {
    "spec_code": "rds.mysql.m1.xlarge"
  }
}
```

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

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

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

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

```
}  
}
```

Response

- Normal response

Table 4-46 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](#).

Status Code

- Normal

202

- Abnormal

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

Error Code

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

4.5.6 Deleting a DB Instance

Function

This API is used to delete 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}
- Parameter description

Table 4-47 Parameters

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

Request

- Request parameters
None

Response

- Normal response

Table 4-48 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](#).

4.5.7 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}={value}

- Parameter description

Table 4-49 Parameters

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

Parameter	Type	Mandatory	Description
id	String	No	<p>Definition 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>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>
name	String	No	<p>Definition Instance name.</p> <p>The asterisk (*) is reserved for the system. If the instance name starts with *, it indicates that fuzzy match is performed based on the value following *. Otherwise, the exact match is performed based on the instance name. The value cannot contain only asterisks (*).</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>

Parameter	Type	Mandatory	Description
type	String	No	<p>Definition Instance type.</p> <p>Constraints N/A</p> <p>Range</p> <ul style="list-style-type: none"> • Single: single-node instance • Ha: primary/standby instance • Replica: read replica • Enterprise: distributed instance (Enterprise Edition) <p>Default Value N/A</p>
datastore_type	String	No	<p>Definition DB engine.</p> <p>Constraints The value is case-sensitive.</p> <p>Range</p> <ul style="list-style-type: none"> • MySQL • PostgreSQL • SQLServer <p>Default Value N/A</p>
vpc_id	String	No	<p>Definition VPC ID. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> • Method 1: Log in to 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>. <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>

Parameter	Type	Mandatory	Description
subnet_id	String	No	<p>Definition Subnet ID. To obtain this parameter value, use either of the following methods:</p> <ul style="list-style-type: none"> • Method 1: Log in to the VPC console and click the target subnet on the Subnets page. You can view the network ID on the displayed page. • Method 2: See the "Querying Subnets" section in the <i>Virtual Private Cloud API Reference</i>. <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>
offset	Integer	No	<p>Definition Index offset. The query starts from the next piece of data indexed by this parameter.</p> <p>Constraints The value must be a non-negative number.</p> <p>Range An integer greater than or equal to 0</p> <p>Default Value 0</p>

Parameter	Type	Mandatory	Description
limit	Integer	No	<p>Definition Number of records to be queried.</p> <p>Constraints N/A</p> <p>Range The default value is 100. The value cannot be a negative number. The minimum value is 1 and the maximum value is 100.</p> <p>Default Value 100</p>
tags	Array of objects	No	<p>Definition Tag key-value pairs of the instance.</p> <ul style="list-style-type: none"> • {key} indicates the tag key. It must be unique and cannot be empty. • {value} indicates the tag value, which can be left empty. <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. For details, see Table 4-50.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>

Table 4-50 tags field data structure description

Parameter	Type	Mandatory	Description
key	String	Yes	<p>Definition Tag key.</p> <p>Constraints N/A</p> <p>Range It must consist of 1 to 128 Unicode characters. It can contain letters, digits, spaces, and special characters <code>._:=-@()</code>. However, it cannot start or end with a space, or start with <code>_sys_</code>.</p> <p>Default Value N/A</p>
value	String	No	<p>Definition Tag value.</p> <p>Constraints N/A</p> <p>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>.</p> <p>Default Value N/A</p>

Request

- Request parameters
None

Response

- Normal response

Table 4-51 Parameters

Parameter	Type	Description
instances	Array of objects	Definition Indicates the DB instance information. For details, see Table 4-52 .
total_count	Integer	Definition Indicates the total number of records. Range N/A

Table 4-52 instances field data structure description

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

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

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

Parameter	Type	Description
enable_ssl	Boolean	<p>Definition Indicates whether SSL is enabled for the instance.</p> <p>Range</p> <ul style="list-style-type: none"> • true: SSL is enabled for the instance. • false: SSL is disabled for the instance.
type	String	<p>Definition Instance type.</p> <p>Range</p> <ul style="list-style-type: none"> • Single: single-node instance • Ha: primary/standby instance • Replica: read replica • Enterprise: distributed instance (Enterprise Edition)
ha	Object	<p>Definition Indicates the primary/standby DB instance information. Returned only when you obtain a primary/standby DB instance list. For details, see Table 4-53.</p>
region	String	<p>Definition Indicates the region where the DB instance is deployed.</p> <p>Range N/A</p>
datastore	Object	<p>Definition Indicates the database information. For details, see Table 4-54.</p>

Parameter	Type	Description
created	String	<p>Definition Indicates the creation time.</p> <p>Range The value is in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100. The value is empty when the instance is being created. After the instance is created, the value is not empty.</p>
updated	String	<p>Definition Indicates the update time.</p> <p>Range The format is the same as that of the created field. The value is empty when the instance is being created. After the instance is created, the value is not empty.</p>
db_user_name	String	<p>Definition Indicates the default username.</p> <p>Range N/A</p>
vpc_id	String	<p>Definition Indicates the VPC ID.</p> <p>Range N/A</p>
subnet_id	String	<p>Definition Indicates the network ID of the subnet.</p> <p>Range N/A</p>
security_group_id	String	<p>Definition Indicates the security group ID.</p> <p>Range N/A</p>

Parameter	Type	Description
flavor_ref	String	<p>Definition Indicates the specification code.</p> <p>Range N/A</p>
cpu	String	<p>Definition Indicates the number of vCPUs. For example, the value 1 indicates 1 vCPU.</p> <p>Range N/A</p>
mem	String	<p>Definition Indicates the memory size in GB.</p> <p>Range N/A</p>
volume	Object	<p>Definition Indicates instance storage. For details, see Table 4-55.</p>
switch_strategy	String	<p>Definition Indicates the database failover priority.</p> <p>Range</p> <ul style="list-style-type: none"> • reliability: Reliability is given priority during the failover. • availability: Availability is given priority during the failover.
read_only_by_user	Boolean	<p>Definition Indicates the read-only status of the DB instance. This parameter is available only to RDS for MySQL.</p> <p>Range</p> <ul style="list-style-type: none"> • true: indicates that the DB instance is set to read-only. • false: indicates that the DB instance is set to read/write.
backup_strategy	Object	<p>Definition Indicates the backup policy. For details, see Table 4-56.</p>

Parameter	Type	Description
maintenance_w indow	String	Definition Indicates the start time of the maintenance time window in the UTC format. Range N/A
nodes	Array of objects	Definition Indicates the primary/standby DB instance information. For details, see Table 4-57 .
related_instanc e	Array of objects	Definition Indicates all associated DB instances. For details, see Table 4-58 .
disk_encryption _id	String	Definition Indicates the disk encryption key ID. Range N/A
enterprise_proje ct_id	String	Definition Indicates the enterprise project ID. Range N/A
time_zone	String	Definition Indicates the time zone. Range N/A
charge_info	Object	Definition Indicates the billing information, which is yearly/monthly or pay-per-use. By default, pay-per-use is used. For details, see Table 4-59 .
tags	Array of objects	Definition Indicates the tag list. If there is no tag in the list, an empty array is returned. For details, see Table 4-60 .

Parameter	Type	Description
backup_used_space	Double	<p>Definition Indicates the backup space usage in GB. This field is returned only when you query information about a specified RDS for PostgreSQL or RDS for SQL Server DB instance.</p> <p>Range N/A</p>
storage_used_space	Double	<p>Definition Indicates the storage space usage in GB. This field is returned only when you query information about a specified RDS for PostgreSQL or RDS for SQL Server DB instance.</p> <p>Range N/A</p>
order_id	String	<p>Definition Indicates the order ID.</p> <p>Range N/A</p>
associated_with_ddm	Boolean	<p>Definition Indicates whether a DDM instance has been associated.</p> <p>Range N/A</p>
max_iops	Long	<p>Definition Indicates the maximum disk IOPS of the instance. This field is returned only for RDS for SQL Server instances.</p> <p>Range N/A</p>

Parameter	Type	Description
expiration_time	String	<p>Definition Indicates the time when an instance expires. The format is yyyy-mm-ddThh:mm:ssZ. This field is returned only for yearly/monthly instances.</p> <p>Range N/A</p>

Table 4-53 ha field data structure description

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

Table 4-54 datastore field data structure description

Parameter	Type	Description
type	String	<p>Definition Indicates the DB engine. Its value can be any of the following and is case-insensitive:</p> <p>Range</p> <ul style="list-style-type: none"> • MySQL • PostgreSQL • SQLServer
version	String	<p>Definition Indicates the database version. When the DB engine is SQL Server, WEB indicates the web edition, SE indicates the standard edition, and EE indicates the enterprise edition.</p> <p>Range N/A</p>
complete_version	String	<p>Definition Indicates the complete version number. This parameter is returned only when the DB engine is MySQL or PostgreSQL.</p> <p>Range N/A</p>

Table 4-55 volume field data structure description

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

Table 4-56 backup_strategy field data structure description

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

Table 4-57 nodes field data structure description

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

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

Table 4-58 related_instance field data structure description

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

Table 4-59 chargeInfo field data structure description

Parameter	Mandatory	Type	Description
charge_mode	Yes	String	Definition Indicates the billing mode. Range <ul style="list-style-type: none"> • prePaid: indicates the yearly/monthly billing mode. • postPaid: indicates the pay-per-use billing mode.

Table 4-60 tags field data structure description

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

- 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": ""
}], "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"],
    "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": ""
  }], {
    "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": ["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": ""
}],
"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](#).

4.5.8 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, or rebooted.

URI

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

Table 4-61 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 4-62 Parameters

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

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

Example Request

- Bind an EIP to a DB instance.

```
{
  "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](#).

4.5.9 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 4-63 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 4-64 Parameters

Parameter	Mandatory	Type	Description
repairStrategy	Yes	String	Specifies the failover priority. Valid value: <ul style="list-style-type: none"> • reliability: Data reliability is preferentially ensured during the failover to minimize the amount of lost data. It is recommended for services that require high data consistency. • availability: Data availability is preferentially ensured during the failover to recover services quickly. It is recommended for services that have high requirements on the database online duration.

Example Request

Change the failover priority of a DB instance to availability.

```
{
  "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](#).

4.5.10 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 4-65 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 4-66 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"> true: A forcible switchover is performed. false: No forcible switchover is performed. <p>NOTE This parameter is valid only for the PostgreSQL DB engine.</p>

Example Request

- Perform a primary/standby switchover.

```
{}
```

- 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](#).

4.5.11 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.

URI

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

Table 4-67 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 4-68 Parameters

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

Example Request

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

```
{
  "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](#).

4.5.12 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 4-69 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 4-70 Parameters

Parameter	Mandatory	Type	Description
start_time	Yes	String	Specifies the start time (UTC).

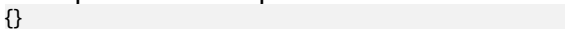
Parameter	Mandatory	Type	Description
end_time	Yes	String	<p>Specifies the end time (UTC).</p> <ul style="list-style-type: none"> For RDS for MySQL and RDS for PostgreSQL databases, the start time and end time must be on the hour, and the interval between them must be one to four hours. For RDS for SQL Server databases, the interval between the start time and end time must be four hours.

Example Request

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

```
{
  "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](#).

4.6 Database Security

4.6.1 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 4-71 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 4-72 Parameters

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

Example Request

Change the database port of a DB instance to 8836.

```
{
```

```
"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](#).

4.6.2 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 4-73 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 4-74 Parameters

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

Example Request

Change the security group of a DB instance.

```
{
  "security_group_id": "23423klj432lk0sdf0234eaa"
}
```

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](#).

4.6.3 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 4-75 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 4-76 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.

```
{
  "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](#).

4.7 Backup and Restoration

4.7.1 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

- 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 4-77 Parameters

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

Request

Table 4-78 Parameters

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

Parameter	Mandatory	Type	Description
name	Yes	String	<p>Definition Backup name.</p> <p>Constraints The backup name must be unique.</p> <p>Range It must be 4 to 64 characters long, start with a letter, and contain only letters (case-sensitive), digits, hyphens (-), and underscores (_).</p> <p>Default Value N/A</p>
description	No	String	<p>Definition Backup description.</p> <p>Constraints N/A</p> <p>Range It can contain a maximum of 256 characters and cannot contain the following special characters: >!<"&'='</p> <p>Default Value N/A</p>

Parameter	Mandatory	Type	Description
databases	No	Array of objects	<p>Definition List of user-created databases for partial backup. For details, see Table 4-79.</p> <p>Constraints</p> <ul style="list-style-type: none"> This parameter is only available for RDS for PostgreSQL and RDS for SQL Server. If backup_database_individually is set to true, databases is mandatory.

Table 4-79 databases field data structure description

Parameter	Mandatory	Type	Description
name	Yes	String	<p>Definition Names of user-created databases.</p> <p>Constraints N/A</p> <p>Range N/A</p> <p>Default Value N/A</p>

Example Request

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

```
{
  "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 4-80** Parameters

| Parameter | Type   | Description                                                                                             |
|-----------|--------|---------------------------------------------------------------------------------------------------------|
| backup    | Object | <b>Definition</b><br>Indicates the backup information.<br>For details, see <a href="#">Table 4-81</a> . |

**Table 4-81** backup field data structure description

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

| Parameter   | Type             | Description                                                                                                                                                                                                                       |
|-------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name        | String           | <p><b>Definition</b><br/>Indicates the backup name.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                               |
| description | String           | <p><b>Definition</b><br/>Indicates the backup description.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                        |
| databases   | Array of objects | <p><b>Definition</b><br/>Indicates a list of user-created databases for partial backup. This parameter is only available for RDS for PostgreSQL and RDS for SQL Server.</p> <p>For details, see <a href="#">Table 4-82</a>.</p>   |
| begin_time  | String           | <p><b>Definition</b><br/>Indicates the backup start time.</p> <p><b>Range</b><br/>The value is in the "yyyy-mm-ddThh:mm:ssZ" format, where "T" indicates the start of the time field, and "Z" indicates the time zone offset.</p> |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                      |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | String | <p><b>Definition</b><br/>Indicates the backup status.</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> <li>• <b>DELETING</b>: backup being deleted</li> </ul>                     |
| type      | String | <p><b>Definition</b><br/>Indicates the backup type.</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</li> </ul> |

**Table 4-82** databases field data structure description

| Parameter | Type   | Description                                                                               |
|-----------|--------|-------------------------------------------------------------------------------------------|
| name      | String | <p><b>Definition</b><br/>Names of user-created databases.</p> <p><b>Range</b><br/>N/A</p> |

- 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](#).

## 4.7.2 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 4-83** 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>                                                                                             |
| backup_id   | No        | <p><b>Definition</b><br/>Backup 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 | 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 <math>N</math>, the resource query starts from the <math>N+1</math> 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.</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.</p> <p><b>Default Value</b><br/>N/A</p> |

## Request

- Request parameters  
None

## Response

- Normal response

**Table 4-84** Parameters

| Parameter   | Type             | Description                                                                                              |
|-------------|------------------|----------------------------------------------------------------------------------------------------------|
| backups     | Array of objects | <p><b>Definition</b><br/>Indicates the backup list.<br/>For details, see <a href="#">Table 4-85</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 4-85** 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.</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.</p>                                         |
| datastore  | Object           | <p><b>Definition</b></p> <p>Indicates the database version.<br/>For details, see <a href="#">Table 4-86</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.<br/>For details, see <a href="#">Table 4-87</a>.</p>                                                                                                                                                                                                                                                                                                                                               |

| Parameter           | Type    | Description                                                                                                                                                                                                                                                                                                         |
|---------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_id         | String  | <p><b>Definition</b><br/>Indicates the ID of the DB instance for which the backup is created.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                       |
| associated_with_ddm | Boolean | <p><b>Definition</b><br/>Indicates whether this instance is associated with a DDM instance.</p> <p><b>Range</b></p> <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 4-86** datastore field data structure description

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

**Table 4-87** databases field data structure description

| Parameter | Type   | Description                                                                                             |
|-----------|--------|---------------------------------------------------------------------------------------------------------|
| name      | String | <p><b>Definition</b><br/>Indicates the name of the self-built database.</p> <p><b>Range</b><br/>N/A</p> |

- Example normal response

Obtaining all backups of an RDS for MySQL instance:

```
{
 "backups": [{
 "id": "43e4feaab48f11e89039fa163ebaa7e4br01",
 "name": "xxxx.xxx",
 "type": "auto",
 "size": 2803,
 "status": "COMPLETED",
 "begin_time": "2018-08-06T12:41:14+0800",
 "end_time": "2018-08-06T12:43:14+0800",
 "datastore": {
 "type": "MySQL",
 "version": "5.7"
 },
 "instance_id": "a48e43ff268f4c0e879652d65e63d0fbin01",
 "associated_with_ddm": false
 }],
 "total_count": 1
}
```

Obtaining all backups of an RDS for PostgreSQL instance:

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

Obtaining all backups of an RDS for SQL Server instance:

```
{
 "backups": [{
 "id": "43e4feaab48f11e89039fa163ebaa7e4br04",
 "name": "xxxx.xxx",
 "type": "manual",
 "size": 2803,
 "status": "COMPLETED",
 "begin_time": "2018-08-06T12:41:14+0800",
 "end_time": "2018-08-06T12:43:14+0800",
 "datastore": {
 "type": "SQLServer",

```

```
 "version": "2014_WEB"
 },
 "databases": [{
 "name": "user01"
 }, {
 "name": "user02"
 }],
 "instance_id": "a48e43ff268f4c0e879652d65e63d0fbin04",
 "associated_with_ddm": false
}],
 "total_count": 1
}
```

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

## Status Code

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

## Error Code

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

## 4.7.3 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 or incremental backup of an instance.

### URI

- URI format  
GET /v3/{project\_id}/backup-files?backup\_id={backup\_id}
- Parameter description

**Table 4-88** 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> |
| backup_id  | Yes       | <p><b>Definition</b><br/>Specifies the backup 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

- Request parameters  
None

## Response

- Normal response

**Table 4-89** Parameters

| Parameter | Type             | Description                                                                                                       |
|-----------|------------------|-------------------------------------------------------------------------------------------------------------------|
| files     | Array of objects | <p><b>Definition</b><br/>Indicates the list of backup files.<br/>For details, see <a href="#">Table 4-90</a>.</p> |

| Parameter | Type   | Description                                                                                                          |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------|
| bucket    | String | <p><b>Definition</b><br/>Indicates the name of the bucket where the file is located.</p> <p><b>Range</b><br/>N/A</p> |

**Table 4-90** files field data structure description

| Parameter         | Type   | Description                                                                                                                                                                                                                                                 |
|-------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name              | String | <p><b>Definition</b><br/>Indicates the file name.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                           |
| size              | Long   | <p><b>Definition</b><br/>Indicates the file size in KB.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                     |
| download_link     | String | <p><b>Definition</b><br/>Indicates the link for downloading the backup file.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                |
| link_expired_time | String | <p><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.</p> <p><b>Range</b><br/>N/A</p> |

| Parameter     | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database_name | String | <p><b>Definition</b></p> <p>Indicates the name of the database.</p> <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> <p><b>Range</b></p> <p>N/A</p> |

- Example normal response

```
{
 "files": [
 {
 "name": "43e4feaab48f11e89039fa163ebaa7e4br01.xxx",
 "size": 2803,
 "download_link": "https://obs.domainname.com/rdsbucket.username.1/xxxxxx",
 "link_expired_time": "2018-08-016T10:15:14+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](#).

## 4.7.4 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 4-91** 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

## 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](#).

## 4.7.5 Deleting Manual Backups in Batches (RDS for SQL Server)

### Function

This API is used to delete manual backups in batches.

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

## Constraints

This API is only available for RDS for SQL Server instances.

## URI

- URI format  
POST /v3/{project\_id}/backups/batch-delete
- Parameter description

**Table 4-92** 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> |

## Request

**Table 4-93** Parameters

| Parameter  | Mandatory | Type             | Description                                                                                                                                                                |
|------------|-----------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| backup_ids | Yes       | Array of strings | <p><b>Definition</b><br/>IDs of the manual backups to be deleted.</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> |

## Example Request

Delete manual backups in batches.

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/backups/batch-delete
{
 "backup_ids" : ["53ad33abe43976054br04", "63ad3439af9776054br04"]
}
```

## Response

- Response parameters

**Table 4-94** Response body parameters

| Parameter      | Type             | Description                                                                                 |
|----------------|------------------|---------------------------------------------------------------------------------------------|
| delete_results | Array of objects | <b>Definition</b><br>Backup deletion results. For details, see <a href="#">Table 4-95</a> . |

**Table 4-95** delete\_results field data structure description

| Parameter  | Type   | Description                                                                                                                                                                                                                                                                                         |
|------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| backup_id  | String | <b>Definition</b><br>Backup ID.<br><b>Range</b><br>N/A                                                                                                                                                                                                                                              |
| error_code | String | <b>Definition</b><br>Code returned after a task is submitted.<br><b>Range</b> <ul style="list-style-type: none"> <li>• If the task is executed successfully, <b>0</b> is returned.</li> <li>• If the task fails to be executed, the specific error code is returned.</li> </ul>                     |
| error_msg  | String | <b>Definition</b><br>Description returned after a task is submitted.<br><b>Range</b> <ul style="list-style-type: none"> <li>• If the task is executed successfully, <b>Success</b> is returned.</li> <li>• If the task fails to be executed, the specific error information is returned.</li> </ul> |

- Example response

```
{
 "delete_results" : [{
```

```
"backup_id" : "dsfae23fsfdsae3435br04",
"error_code" : "DBS.200054",
"error_msg" : "the backup is in use"
},
{
 "backup_id" : "ed23545223fsfdsae3435br04",
 "error_code" : "0",
 "error_msg" : "Success"
}
]}
```

## Status Code

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

## Error Code

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

## 4.7.6 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.
- 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 4-96** Parameters

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

## Request

**Table 4-97** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | String | <p>Specifies the DB instance name.</p> <p>The DB instance name of the same type must be unique for the same tenant.</p> <p>Valid value:</p> <ul style="list-style-type: none"> <li>• RDS for MySQL: The DB instance name must be 4 to 64 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 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> <p>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking.</p> |
| flavor_ref | Yes       | String | <p>Specification code. The value cannot be left blank.</p> <p>For details, see <b>spec_code</b> in section <a href="#">Querying Database Specifications</a>.</p>                                                                                                                                                                                                                                                                                                                        |
| volume     | Yes       | Object | <p>Specifies the volume information.</p> <p>For details, see <a href="#">Table 4-102</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                   |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| availability_zone | Yes       | String | Specifies the AZ ID. If the DB instance is not a single instance, you need to specify an AZ for each node of the instance and separate the AZs with commas (,). For details, see the example. |
| restore_point     | Yes       | Object | Specifies the restoration information. For details, see <a href="#">Table 4-103</a> .                                                                                                         |
| ha                | No        | Object | Specifies the HA configuration parameters, which are used when creating primary/standby DB instances. For details, see <a href="#">Table 4-98</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> </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> |
| backup_strategy       | No        | Object | <p>Specifies the advanced backup policy.</p> <p>For details, see <a href="#">Table 4-101</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| enterprise_project_id | No        | String | <p>Specifies the project ID.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| disk_encryption_id    | No        | String | <p>Specifies the key ID for disk encryption. The default value is empty.</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>                                                                     |
| 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> |

| 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> |
| charge_info       | No        | Object | <p>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 4-104</a>.</p>                                                                                                                                                                                                                                                                                                    |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                 |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| collation | No        | String | This parameter applies only to RDS for SQL Server DB instances.<br>Value range: character sets queried in <a href="#">Querying the Available SQL Server Character Set</a> . |

**Table 4-98** 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 4-99** datastore field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                            |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | Specifies the DB engine. Value: SQLServer                                                                                                              |
| version   | Yes       | String | Specifies the database version.<br>For details about supported database versions, see <a href="#">Querying Version Information About a DB Engine</a> . |

**Table 4-100** Version mapping for RDS for SQL Server restoration

| Original | Restore To   |
|----------|--------------|
| 2014     | 2014<br>2014 |
| 2014     | 2014         |
| 2016     | 2016<br>2016 |
| 2016     | 2016         |

**Table 4-101** 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 | Specifies the retention days for specific backup files.<br><br>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. |

**Table 4-102** volume field data structure description

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                           |
|-----------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String  | Specifies the storage type.<br>Its value can be any of the following and is case-sensitive: <ul style="list-style-type: none"> <li>• <b>ULTRAHIGH:</b> ultra-high I/O storage.</li> <li>• <b>CLOUDSSD:</b> cloud SSD storage.</li> <li>• <b>ESSD:</b> extreme SSD storage.</li> </ul> |
| size      | Yes       | Integer | Specifies the storage space.<br>Its value range is from 40 to 4000, in GB. The value must be a multiple of 10.<br><b>NOTICE</b><br>The storage of the new DB instance must be at least equal to that of the original DB instance.                                                     |

**Table 4-103** restore\_point field data structure description

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance_id | Yes       | String | Specifies the DB instance ID.                                                                                                                                                                                                                                                                                                                                                                         |
| type        | Yes       | String | Specifies the restoration mode. Enumerated values include: <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> |
| backup_id   | No        | String | Specifies the ID of the backup used to restore data. This parameter must be specified when backups are used for restoration. <p><b>NOTICE</b><br/>When <b>type</b> is not mandatory, <b>backup_id</b> is mandatory.</p>                                                                                                                                                                               |

| Parameter    | Mandatory | Type    | Description                                                                                                                                                                                                |
|--------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.<br><b>NOTICE</b><br>When <b>type</b> is mandatory, <b>restore_time</b> is mandatory. |

**Table 4-104** charge\_info field data structure description

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| charge_mode | Yes       | String  | Specifies the billing mode.                                                                                                                                                                                                                                                                                                                                                                                         |
| period_type | No        | String  | Specifies the subscription type.<br>Value range: <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> <b>NOTE</b><br>This parameter is valid and mandatory if <b>charge_mode</b> is set to <b>prePaid</b> .                                                               |
| period_num  | No        | Integer | Specifies the subscription period. This parameter is valid and mandatory if <b>charge_mode</b> is set to <b>prePaid</b> .<br>Value range: <ul style="list-style-type: none"> <li>• When <b>period_type</b> is set to <b>month</b>, the parameter value ranges from <b>1</b> to <b>9</b>.</li> <li>• When <b>period_type</b> is set to <b>year</b>, the parameter value ranges from <b>1</b> to <b>3</b>.</li> </ul> |

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_auto_renew | No        | boolean | Specifies whether automatic renewal is enabled for yearly/monthly DB instances. The renewal period is the same as the original period and the order will be automatically paid. <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 | 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. <ul style="list-style-type: none"> <li><b>true</b>: indicates the order will be automatically paid.</li> <li><b>false</b>: indicates the order will be manually paid. The default value is <b>false</b>.</li> </ul>     |

### Example Request

- Restore a MySQL backup to a new DB instance.

```
{
 "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",
 "security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
 "backup_strategy": {
 "keep_days": 2,
 "start_time": "19:00-20:00"
 },
 "password": "Demo@12345678",
 "configuration_id": "52e86e87445847a79bf807ceda213165pr01",
 "time_zone": "UTC+04:00",
 "restore_point": {
```

```

 "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01",
 "type": "backup",
 "backup_id": "2f4ddb93-b901-4b08-93d8-1d2e472f30fe"
 }
}

```

- Restore 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
 },
 "vpc_id": "490a4a08-ef4b-44c5-94be-3051ef9e4fce",
 "subnet_id": "0e2eda62-1d42-4d64-a9d1-4e9aa9cd994f",
 "security_group_id": "2a1f7fc8-3307-42a7-aa6f-42c8b9b8f8c5",
 "backup_strategy": {
 "keep_days": 2,
 "start_time": "19:00-20:00"
 },
 "password": "Demo@12345678",
 "configuration_id": "52e86e87445847a79bf807ceda213165pr01",
 "restore_point": {
 "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01",
 "type": "timestamp",
 "restore_time": 1532001446987
 }
}

```

## Response

- Normal response

**Table 4-105** Parameters

| Parameter | Type   | Description                                                                                                                                                  |
|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| instance  | Object | Indicates the DB instance information.<br>For details, see <a href="#">Table 4-106</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. |

| Parameter | Type   | Description                                                                                                                                        |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 4-106** instance description

| Parameter | Type   | Description                                                                                                                                                               |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | Indicates the DB instance ID.                                                                                                                                             |
| name      | String | Indicates the DB instance name. The DB instance name of the same type must be unique for 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. For details, see <a href="#">Table 4-107</a> .                                                                                        |
| ha        | Object | Indicates the HA configuration parameters. This parameter is returned only when primary/ standby DB instances are created. For details, see <a href="#">Table 4-108</a> . |

| Parameter        | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| configuration_id | String | Indicates the parameter template ID. This parameter is returned only when a custom parameter template is used during DB instance creation.                                                                                                                                                                                                                                                                                                                                                                                                 |
| port             | String | Indicates the database port information. <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> </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> |
| backup_strategy  | Object | Indicates the automated backup policy.<br>For details, see <a href="#">Table 4-109</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| flavor_ref       | String | Indicates the specification ID.<br>For details, see <b>spec_code</b> in <a href="#">Table 4-13</a> in section <a href="#">Querying Database Specifications</a> .                                                                                                                                                                                                                                                                                                                                                                           |
| volume           | Object | Indicates the volume information.<br>For details, see <a href="#">Table 4-110</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| region            | String | Indicates the region ID.                                                                                                                                                                                                                                                                                                                                                                                            |
| availability_zone | String | Indicates the AZ ID.                                                                                                                                                                                                                                                                                                                                                                                                |
| vpc_id            | 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>                                                                      |
| 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> |

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

**Table 4-107** datastore field data structure description

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

| Parameter        | Mandatory | Type   | Description                                                                                                                                                 |
|------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| version          | Yes       | String | Indicates the database version. 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 4-108** ha field data structure description

| Parameter | Mandatory | Type   | Description                                                           |
|-----------|-----------|--------|-----------------------------------------------------------------------|
| mode      | Yes       | String | Indicates the primary/standby instance type. The value is <b>Ha</b> . |

| Parameter        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 4-109** 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> |
| 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.</p>                                                                                                                                                                                                                                                                                                                                                                                                                               |

**Table 4-110** volume field data structure description

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                          |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String  | Specifies the volume type.<br>Its value can be any of the following and is case-sensitive: <ul style="list-style-type: none"> <li>● <b>ULTRAHIGH:</b> ultra-high I/O storage.</li> <li>● <b>CLOUDSSD:</b> cloud SSD storage.</li> <li>● <b>ESSD:</b> extreme SSD storage.</li> </ul> |
| size      | Yes       | Integer | Indicates the volume size.<br>Its value range is from 40 to 4000, in GB. The value must be a multiple of 10.                                                                                                                                                                         |

- Example normal response

```
{
 "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": "bd51fb45-2dcb-4296-8783-8623bfe89bb7",
 "security_group_id": "23fd0cd4-15dc-4d65-bdb3-8844cc291be0"
 },
 "job_id": "bf003379-afea-4aa5-aa83-4543542070bc"
}
```

**RDS for SQL Server**

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

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

## Status Code

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

## Error Code

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

# 4.8 Log Information Queries

## 4.8.1 Querying Slow Query Logs Through LTS

### Function

This API is used to query slow query logs of a DB instance when Log Tank Service (LTS) is available in the current region.

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

## Constraints

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 4-111** 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 4-112** 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. 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. 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.

```
{
 "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 4-113** Parameters

| Parameter       | Type             | Description                                                                             |
|-----------------|------------------|-----------------------------------------------------------------------------------------|
| slow_log_list   | Array of objects | <b>Definition</b><br>Slow query logs.<br>For details, see <a href="#">Table 4-114</a> . |
| long_query_time | String           | <b>Definition</b><br>Threshold for slow query logs.<br><b>Range</b><br>N/A              |

**Table 4-114** 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 that slow query 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.<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](#).

## 4.8.2 Querying Error Logs Through LTS

### Function

This API is used to query error logs of a DB instance when Log Tank Service (LTS) is available in the current region.

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

### URI

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

**Table 4-115** 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 4-116** 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. 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. 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> . |
| 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.                                                                                                                  |

| Parameter | Mandatory | Type    | Description                                                                                                                 |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------|
| 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.

```
{
 "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 4-117** Parameters

| Parameter      | Type             | Description                                                   |
|----------------|------------------|---------------------------------------------------------------|
| error_log_list | Array of objects | Error logs.<br>For details, see <a href="#">Table 4-118</a> . |

**Table 4-118** 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](#).

## 4.8.3 (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 4-119** 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.                                                                                                                                 |
| 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. |

| Parameter | Mandatory | Description                                                                                                                                                                                                                     |
|-----------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| end_date  | Yes       | End time in the "yyyy-mm-ddThh:mm:ssZ" format.<br>T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.<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 1 by default if it is not specified.                                                                                                                                 |
| limit     | No        | Number of records on each page. Its value range is from 1 to 100. The parameter value is 10 by default if it is not specified.                                                                                                  |
| level     | No        | Log level. The default value is ALL. Valid values: <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

## Response

- Normal response

**Table 4-120** Parameters

| Parameter      | Type             | Description                                                                       |
|----------------|------------------|-----------------------------------------------------------------------------------|
| error_log_list | Array of objects | Indicates detailed information.<br>For details, see <a href="#">Table 4-121</a> . |

| Parameter    | Type    | Description                            |
|--------------|---------|----------------------------------------|
| total_record | Integer | Indicates the total number of records. |

**Table 4-121** 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](#).

## 4.8.4 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\_date}&end\_date={end\_date}
- Parameter description

**Table 4-122** 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 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.                                                                                                              |
| 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. |
| 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.   |

| Parameter | Mandatory | Description                                                                                                                                                                                                                                        |
|-----------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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> |

## Request

- Request parameters  
None

## Response

- Normal response

**Table 4-123** 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 4-124</a> .             |
| totalRecord | Integer | Indicates the total number of records.        |
| startTime   | Long    | Indicates the start time.                     |
| endTime     | Long    | Indicates the end time.                       |

**Table 4-124** 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.  |

| Parameter    | Type   | Description                                           |
|--------------|--------|-------------------------------------------------------|
| 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](#).

## 4.8.5 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 4-125** 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 4-126** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_name | No        | String | <p><b>Definition</b><br/>Name of the file to be downloaded.</p> <p>To obtain the file name, click the instance name on the console and choose <b>Logs &gt; Slow Query Logs</b>.</p> <p><b>Constraints</b><br/>This parameter is mandatory for Microsoft SQL Server.</p> <p><b>Range</b><br/>N/A</p> <p><b>Default Value</b><br/>N/A</p> |

## 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 4-127** Parameters

| Parameter | Type | Description                                                                                                                     |
|-----------|------|---------------------------------------------------------------------------------------------------------------------------------|
| list      | List | <p><b>Definition</b><br/>Indicates the links for downloading slow query logs. For details, see <a href="#">Table 4-128</a>.</p> |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | String  | <p><b>Definition</b><br/>Indicates the status of generating links for downloading slow query logs.</p> <p><b>Range</b></p> <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 | <p><b>Definition</b><br/>Indicates the number of links for downloading slow query logs.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                     |

**Table 4-128** linkInfo field data structure description

| Parameter   | Type   | Description                                                                                                                        |
|-------------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| workflow_id | String | <p><b>Definition</b><br/>Task ID.</p> <p><b>Range</b><br/>For the MySQL DB engine, the value is always "".</p>                     |
| file_name   | String | <p><b>Definition</b><br/>Indicates the name of the generated file for downloading slow query logs.</p> <p><b>Range</b><br/>N/A</p> |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | String | <p><b>Definition</b><br/>Indicates the generation status of the current link.</p> <p><b>Range</b></p> <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 | <p><b>Definition</b><br/>Indicates the file size in KB.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                    |
| file_link | String | <p><b>Definition</b><br/>Indicates the download link. The link is valid for 5 minutes.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                     |
| create_at | Long   | <p><b>Definition</b><br/>Indicates the generation time.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                    |
| update_at | Long   | <p><b>Definition</b><br/>Indicates the update time.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                                                        |

- 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.opxxx.svc.rds.xxxx",
 "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](#).

## 4.8.6 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 4-129** 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 4-130** Parameters

| Parameter         | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                               |
|-------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| keep_days         | Yes       | Integer | Number of days for storing audit logs. The value range is from 0 to 732. <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 | This parameter is valid only when SQL audit is disabled. <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.

```
{
 "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 4-131** 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](#).

## 4.8.7 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 4-132** 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

## Response

- Normal response

**Table 4-133** 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. |

- 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](#).

## 4.8.8 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 4-134** 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>                                                                        |

| Parameter  | Mandatory | Description                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.</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.</p> <p><b>Default Value</b><br/>N/A</p> |
| offset     | Yes       | <p><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.</p> <p><b>Constraints</b><br/>The value must be a non-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>                                |

| Parameter | Mandatory | Description                                                                                                                                                         |
|-----------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit     | Yes       | <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, 50]</p> <p><b>Default Value</b><br/>N/A</p> |

## Request

- Request parameters  
None

## Response

- Normal response

**Table 4-135** Parameters

| Parameter    | Type             | Description                                                                                                    |
|--------------|------------------|----------------------------------------------------------------------------------------------------------------|
| auditlogs    | Array of objects | <p><b>Definition</b><br/>Indicates detailed information.<br/>For details, see <a href="#">Table 4-136</a>.</p> |
| total_record | Integer          | <p><b>Definition</b><br/>Indicates the total number of records.</p> <p><b>Range</b><br/>N/A</p>                |

**Table 4-136** auditlogs field data structure description

| Parameter | Type   | Description                                                                                                                                        |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | <p><b>Definition</b><br/>Indicates the audit log ID. For the SQL Server engine, the ID is the audit log file name.</p> <p><b>Range</b><br/>N/A</p> |

| Parameter  | Type   | Description                                                                                                                                                                                                                                                                     |
|------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name       | String | <p><b>Definition</b><br/>Indicates the audit log file name.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                     |
| size       | double | <p><b>Definition</b><br/>Indicates the size in KB of the audit log.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                             |
| begin_time | String | <p><b>Definition</b><br/>Indicates the start time of the audit log.</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.</p> |
| end_time   | String | <p><b>Definition</b><br/>Indicates the end time of the audit log.</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.</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](#).

## 4.8.9 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 4-137** 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 4-138** 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.

```
{
 "ids": ["fa163e9970a3t11e9d834e122fdceb1d6br01", "fa163ea0e2bet11e9d8364943103c94c5br01"]
}
```

## Response

- Normal response

**Table 4-139** 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/xxxxx", "https://obs.domainname.com/rdsbucket.username.2/xxxxx"]
}
```

- Abnormal response

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

## Status Code

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

## Error Code

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

## 4.9 Database and Account Management (MySQL)

### 4.9.1 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, or abnormal.

#### URI

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

**Table 4-140** 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 4-141** Parameters

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

## Example Request

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

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

## Response

- Normal response

**Table 4-142** 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](#).

## 4.9.2 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 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 4-143** 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

## Response

- Normal response

**Table 4-144** Parameters

| Parameter   | Type             | Description                                                                                      |
|-------------|------------------|--------------------------------------------------------------------------------------------------|
| databases   | Array of objects | Each element in the list indicates a database.<br>For details, see <a href="#">Table 4-145</a> . |
| total_count | Integer          | Indicates the total number of databases.                                                         |

**Table 4-145** 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"
 }
],
 "total_count": 2
}
```

```

 "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](#).

## 4.9.3 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 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.

### URI

- URI format  
GET /v3/{project\_id}/instances/{instance\_id}/db\_user/database?user-name={user-name}&page={page}&limit={limit}
- Parameter description

**Table 4-146** 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 1.                                                   |
| limit       | Yes       | Specifies the number of records on each page. The value ranges from 1 (inclusive) to 100 (inclusive). |

## Request

- Request parameters  
None

## Response

- Normal response

**Table 4-147** Parameters

| Parameter   | Type             | Description                                                                                      |
|-------------|------------------|--------------------------------------------------------------------------------------------------|
| databases   | Array of objects | Each element in the list indicates a database.<br>For details, see <a href="#">Table 4-148</a> . |
| total_count | Integer          | Indicates the total number of databases.                                                         |

**Table 4-148** databases element structure description

| Parameter | Type    | Description                                                                                                                                                                                                     |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | String  | Indicates the database name.                                                                                                                                                                                    |
| readonly  | Boolean | Indicates the read-only permission. <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](#).

## 4.9.4 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, or abnormal.

### URI

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

**Table 4-149** 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       | Specifies the DB instance ID.                                                                            |
| db_name     | Yes       | Specifies the name of the database to be deleted.                                                        |

## Request

Empty request body.

## Example Request

```
{}
```

## Response

- Normal response

**Table 4-150** 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](#).

## 4.9.5 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, 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 4-151** 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       | Specifies the DB instance ID.                                                                            |

## Request

**Table 4-152** 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.                                                                                                                                                                                                                                           |
| is_privilege | No        | Boolean          | Whether a privileged user is created. <ul style="list-style-type: none"> <li>• <b>true</b>: A privileged user is created.</li> <li>• <b>false</b>: A non-privileged user is created.</li> </ul>                                                                                                                                                                                                   |
| 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 <b>10.10.10.%</b>, all IP addresses in the subnet <b>10.10.10.X</b> 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 4-153</a> .                                                                                                                                                                                                                                                                                                   |

**Table 4-153** databases element structure description

| Parameter | Mandatory | Type   | Description    |
|-----------|-----------|--------|----------------|
| name      | Yes       | String | Database name. |

| Parameter | Mandator<br>y | Type    | Description                                                                                                                                                                                                        |
|-----------|---------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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**

```
{
 "name": "rds",
 "password": "*****",
 "comment": "mysql",
 "is_privilege": false,
 "hosts": [
 "%",
],
 "databases": [
 {
 "name": "****",
 "readonly": false
 }
]
}
```

## Response

- Normal response

**Table 4-154** 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](#).

## 4.9.6 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 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 4-155** 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 <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

## Response

- Normal response

**Table 4-156** Parameters

| Parameter   | Type             | Description                                                                     |
|-------------|------------------|---------------------------------------------------------------------------------|
| users       | Array of objects | Database account information.<br>For details, see <a href="#">Table 4-157</a> . |
| total_count | Integer          | Total number of database accounts.                                              |

**Table 4-157** users element structure description

| Parameter | Type   | Description   |
|-----------|--------|---------------|
| name      | String | Account name. |

- Example normal response

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

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

## Status Code

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

## Error Code

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

## 4.9.7 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 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 4-158** 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       | 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

## Response

- Normal response

**Table 4-159** Parameters

| Parameter   | Type             | Description                                                                                              |
|-------------|------------------|----------------------------------------------------------------------------------------------------------|
| users       | Array of objects | Each element in the list indicates a database account.<br>For details, see <a href="#">Table 4-160</a> . |
| total_count | Integer          | Indicates the total number of database users.                                                            |

**Table 4-160** 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

```
{
 "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](#).

## 4.9.8 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, or abnormal.

### URI

- URI format  
DELETE /v3/{project\_id}/instances/{instance\_id}/db\_user/{user\_name}
- Parameter description

**Table 4-161** 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> . |
| 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

```
{}
```

### Response

- Normal response

**Table 4-162** 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](#).

## 4.9.9 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, or abnormal.

### URI

- URI format

POST /v3/{project\_id}/instances/{instance\_id}/db\_user/resetpwd

- Parameter description

**Table 4-163** 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 4-164** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | String | Specifies the username of the database account.                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| password  | Yes       | String | Specifies the password of the database account.<br>Valid value:<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 (~!@#%&^*_-=+?,()&).<br>The value must be different from the account name or account name spelled backwards.<br>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking. |

## Example Request

Set a password for user **rds**.

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

## Response

- Normal response

**Table 4-165** 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](#).

## 4.9.10 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, or abnormal.

### URI

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

**Table 4-166** 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 4-167** 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 4-168</a> . |

**Table 4-168** 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**.

```

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

```

## Response

- Normal response

**Table 4-169** 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](#).

## 4.9.11 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, or abnormal.

### URI

- URI format  
DELETE /v3/{project\_id}/instances/{instance\_id}/db\_privilege
- Parameter description

**Table 4-170** 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 4-171** 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><br>For more information about the element structure, see <a href="#">Table 4-172</a> . |

**Table 4-172** 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

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

### Response

- Normal response

**Table 4-173** 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](#).

## 4.9.12 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.

### URI

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

**Table 4-174** 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> . |

| Parameter   | Mandatory | Description                   |
|-------------|-----------|-------------------------------|
| instance_id | Yes       | Specifies the DB instance ID. |

## Request

**Table 4-175** Parameters

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                        |
|-------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| db_user_pwd | Yes       | String | Specifies the database password.<br>Valid value:<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 (~!@#%&^*-_ = +?,()&).<br>You are advised to enter a strong password to improve security, preventing security risks such as brute force cracking. |

## Example Request

Reset the password for user **root**.

```
{
 "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](#).

# 4.10 Database and Account Management (PostgreSQL)

## 4.10.1 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, 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 4-176** 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> |

| Parameter   | Mandatory | Description                                                                                                                                 |
|-------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 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 4-177 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.<br/>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> |

| Parameter     | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                              |
|---------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.<br/>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> |
| 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 collocation.</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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Example Request

Create a database named **rds\_test**.

```
{
 "name": "rds_test",
 "owner": "test",
 "template": "template0",
 "character_set": "UTF8",
 "lc_collate": "en_US.UTF-8",
 "lc_ctype": "en_US.UTF-8"
}
```

## Response

- Normal response

**Table 4-178** 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](#).

## 4.10.2 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, 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 4-179** 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 4-180** 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**

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

## Response

- Normal response

**Table 4-181** 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](#).

## 4.10.3 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, or abnormal.

## URI

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

**Table 4-182** 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 4-183** 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.<br/>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/>Specifies schemas. Each element is the schema information associated with the database. A single request supports a maximum of 20 elements.<br/>For details on the element structure, see <a href="#">Table 4-184</a>.</p> <p><b>Constraints</b><br/>N/A</p>                                                                                                                                                                                  |

**Table 4-184** 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.

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

## Response

- Normal response

**Table 4-185** 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](#).

## 4.10.4 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, 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 4-186** 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 4-187** 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 4-188</a>.</p> <p><b>Constraints</b><br/>N/A</p>                                                                                                                                                                                                     |

**Table 4-188** 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**.

```
{
 "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 4-189** 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](#).

## 4.10.5 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, or abnormal.

## URI

- URI format  
POST /v3/{project\_id}/instances/{instance\_id}/db\_user/resetpwd
- Parameter description

**Table 4-190** 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 4-191** 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/>N/A</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 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.</p> <p>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

Reset the password of **rds**.

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

## Response

- Normal response

**Table 4-192** 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](#).

## 4.10.6 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 state.
- The details about databases of read replicas cannot be queried.

### URI

- URI format

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

- Parameter description

**Table 4-193** 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 starts from 1.</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, 100]</p> <p><b>Default Value</b><br/>N/A</p>                                                                     |

## Request

- Request parameters  
None

## Response

- Normal response

**Table 4-194** 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 4-195</a> . |
| total_count | Integer          | <b>Definition</b><br>Indicates the total number of databases.<br><b>Range</b><br>N/A                                  |

**Table 4-195** 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 |

| Parameter   | Type    | Description                                                                                                |
|-------------|---------|------------------------------------------------------------------------------------------------------------|
| 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](#).

## 4.10.7 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, or abnormal.

### URI

- URI format  
GET /v3/{project\_id}/instances/{instance\_id}/db\_user/detail? page={page}&limit={limit}
- Parameter description

**Table 4-196** 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>                                                                                             |

| Parameter | Mandatory | Description                                                                                                                                                         |
|-----------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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>    |
| 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, 100]</p> <p><b>Default Value</b><br/>N/A</p> |

## Request

- Request parameters  
None

## Response

- Normal response

**Table 4-197** Parameters

| Parameter | Type             | Description                                                                                                                              |
|-----------|------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| users     | Array of objects | <p><b>Definition</b><br/>Each element in the list indicates a database account.</p> <p>For details, see <a href="#">Table 4-198</a>.</p> |

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

**Table 4-198** users element structure description

| Parameter  | Type             | Description                                                                                                               |
|------------|------------------|---------------------------------------------------------------------------------------------------------------------------|
| name       | String           | <p><b>Definition</b><br/>Indicates the account name.</p> <p><b>Range</b><br/>N/A</p>                                      |
| attributes | Object           | <p><b>Definition</b><br/>Indicates permission attributes of a user.<br/>For details, see <a href="#">Table 4-199</a>.</p> |
| memberof   | Array of strings | <p><b>Definition</b><br/>Indicates default rights of a user.</p> <p><b>Range</b><br/>N/A</p>                              |

**Table 4-199** attributes element structure description

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

| 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><br/>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> |
| rolconnlimit   | Integer | <p><b>Definition</b><br/>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><br/>N/A</p>                                                                                                       |
| rolreplication | Boolean | <p><b>Definition</b><br/>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><br/>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](#).

## 4.10.8 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 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 4-200** Parameters

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

| Parameter | Mandatory | Description                                                                                                                                                         |
|-----------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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>    |
| 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, 100]</p> <p><b>Default Value</b><br/>N/A</p> |

## Request

- Request parameters  
None

## Response

- Normal response

**Table 4-201** Parameters

| Parameter        | Type             | Description                                                                                                                          |
|------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| database_schemas | Array of objects | <p><b>Definition</b><br/>Each element in the list indicates a database schema.<br/>For details, see <a href="#">Table 4-202</a>.</p> |

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

**Table 4-202** users element structure description

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

- 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](#).

## 4.11 Database and Account Management (Microsoft SQL Server)

### 4.11.1 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 4-203** 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> |

#### Request

- Request parameters  
None

#### Response

- Normal response

**Table 4-204** Parameters

| Parameter | Type         | Description                                                                                            |
|-----------|--------------|--------------------------------------------------------------------------------------------------------|
| charSets  | List<String> | <p><b>Definition</b><br/>Indicates the character set information list.</p> <p><b>Range</b><br/>N/A</p> |

- 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](#).

## 4.11.2 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, or abnormal.

### URI

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

**Table 4-205** 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 4-206** 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.<br/>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**.

```
{
 "name": "rds-test"
}
```

## Response

- Normal response

**Table 4-207** 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](#).

## 4.11.3 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 or switchover in progress state.

### 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 4-208** 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

## Response

- Normal response

**Table 4-209** Parameters

| Parameter | Type             | Description                                                                                                                   |
|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------|
| databases | Array of objects | <p><b>Definition</b><br/>Each element in the list indicates a database.<br/>For details, see <a href="#">Table 4-210</a>.</p> |

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

**Table 4-210** databases element structure description

| Parameter     | Type   | Description                                                                                                                                                                                                                                                                                                                                                  |
|---------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name          | String | <p><b>Definition</b><br/>Database name.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                                                                                                                      |
| character_set | String | <p><b>Definition</b><br/>Character set used by the database.</p> <p><b>Range</b><br/>For details about the character sets supported by RDS for SQL Server, see <a href="#">Table 4-204</a>.</p>                                                                                                                                                              |
| 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>NotExists:</b> The database does not exist.</li> </ul> |

- 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](#).

# 4.11.4 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, 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 4-211** 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> |

| Parameter   | Mandatory | Description                                                                                                                                 |
|-------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 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 4-212 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/>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>.</p> <p><b>Default Value</b><br/>N/A</p> |

| 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**

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

## Response

- Normal response

**Table 4-213** 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](#).

# 4.11.5 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, 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 4-212](#)) and account naming rules (see [Table 4-215](#)), for example, containing 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 4-214** 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 4-215** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                      |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | 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/>N/A</p> <p><b>Default Value</b><br/>N/A</p> |

| 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.

```
{
 "name": "rdsuser",
 "password": "Test@12345678"
}
```

## Response

- Normal response

**Table 4-216** 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](#).

## 4.11.6 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 state.

### URI

- URI format  
GET /v3/{project\_id}/instances/{instance\_id}/db\_user/detail?  
page={page}&limit={limit}
- Parameter description

**Table 4-217** 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

## Response

- Normal response

**Table 4-218** 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 4-219</a> . |
| total_count | Integer          | <b>Definition</b><br>Indicates the total number of database users.<br><b>Range</b><br>N/A                                     |

**Table 4-219** users element structure description

| Parameter | Type   | Description                                                                                                                                                                                                                                 |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | String | <b>Definition</b><br>Indicates the account name.<br><b>Range</b><br>N/A                                                                                                                                                                     |
| state     | String | <b>Definition</b><br>Indicates the database user status.<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](#).

## 4.11.7 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, or abnormal.

### URI

- URI format  
DELETE /v3/{project\_id}/instances/{instance\_id}/db\_user/{user\_name}
- Parameter description

**Table 4-220** 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>                                                                                             |
| user_name   | Yes       | <p><b>Definition</b><br/>Specifies the username of the account to be deleted.</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

Empty request body.

## Example Request

```
{
```

## Response

- Normal response

**Table 4-221** 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](#).

## 4.11.8 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, or abnormal.

### URI

- URI format

POST /v3/{project\_id}/instances/{instance\_id}/db\_privilege

- Parameter description

**Table 4-222** 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 4-223** 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/>N/A</p> <p><b>Default Value</b><br/>N/A</p> |

| Parameter | Mandatory | Type             | Description                                                                                                                                                                                                           |
|-----------|-----------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 4-224</a>.</p> |

**Table 4-224** users field data structure description

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | String  | <p><b>Definition</b><br/>Username of the database account.</p> <p><b>Constraints</b><br/>Currently, SQL users without login names cannot be authorized.</p> <p><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>.</p> <p><b>Default Value</b><br/>N/A</p> |
| readonly  | No        | Boolean | <p><b>Definition</b><br/>Whether the permission is read-only.</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/write</li> </ul> <p><b>Default Value</b><br/>false</p>                                                                                                                               |

## Example Request

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

## Response

- Normal response

**Table 4-225** 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](#).

## 4.11.9 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, or abnormal.

### URI

- URI format  
DELETE /v3/{project\_id}/instances/{instance\_id}/db\_privilege
- Parameter description

**Table 4-226** 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 4-227** 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/>N/A</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 more information about the element structure, see <a href="#">Table 4-228</a>.</p> |

**Table 4-228** users field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | Yes       | 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/>It contains 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>.</p> <p><b>Default Value</b><br/>N/A</p> |

### Example Request

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

### Response

- Normal response

**Table 4-229** 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](#).

# 4.12 Parameter Management

## 4.12.1 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](#).

### URI

- URI format  
GET /v3/{*project\_id*}/configurations
- Parameter description

**Table 4-230** 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> |

### Request

- Request parameters  
None

### Response

- Normal response

**Table 4-231** Parameters

| Parameter      | Type             | Description                                                                                                           |
|----------------|------------------|-----------------------------------------------------------------------------------------------------------------------|
| configurations | Array of objects | <p><b>Definition</b><br/>Indicates the parameter template list.<br/>For details, see <a href="#">Table 4-232</a>.</p> |

**Table 4-232** configurations field data structure description

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

| 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_v<br>ersion_<br>name | String  | <b>Definition</b><br>Indicates the database version name.<br><b>Range</b><br>N/A                                                                                                                                                                                                                   |
| datastore_<br>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.                                                     |
| 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.                                                       |
| user_<br>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](#).

## 4.12.2 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 new parameter template cannot have the same name as any existing parameter template.

### URI

- URI format  
POST /v3/{project\_id}/configurations

- Parameter description

**Table 4-233** 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> |

## Request

**Table 4-234** 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 4-235</a>.</p> <p><b>Constraints</b><br/>N/A</p>                                                                                                                                                                            |

| Parameter   | Mandatory | Type               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------|-----------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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>                                                                                                                                                                                                                                                                                                                                  |
| 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 4-235** 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>                                                     |
| version   | Yes       | String | <p><b>Definition</b><br/>DB engine version.</p> <p><b>Constraints</b><br/>For details, see <a href="#">Constraints</a>.</p> <p><b>Range</b></p> <ul style="list-style-type: none"> <li>• MySQL: 5.7</li> <li>• PostgreSQL: 12</li> <li>• Microsoft SQL Server: 2014_SE</li> </ul> <p><b>Default Value</b><br/>N/A</p> |

## Example Request

Create a parameter template named **configuration\_test**.

```
{
 "name": "configuration_test",
 "description": "configuration_test",
 "values": {
 "div_precision_increment": "6",
 "connect_timeout": "20"
 },
 "datastore": {
 "type": "mysql",
 "version": "5.7"
 }
}
```

## Response

- Normal response

**Table 4-236** Parameters

| Parameter     | Type   | Description                                                                                                                  |
|---------------|--------|------------------------------------------------------------------------------------------------------------------------------|
| configuration | Object | <p><b>Definition</b><br/>Indicates the parameter template information.<br/>For details, see <a href="#">Table 4-237</a>.</p> |

**Table 4-237** configuration field data structure description

| Parameter              | Type   | Description                                                                                         |
|------------------------|--------|-----------------------------------------------------------------------------------------------------|
| id                     | String | <p><b>Definition</b><br/>Indicates the parameter template ID.<br/><b>Range</b><br/>N/A</p>          |
| name                   | String | <p><b>Definition</b><br/>Indicates the parameter template name.<br/><b>Range</b><br/>N/A</p>        |
| datastore_version_name | String | <p><b>Definition</b><br/>Indicates the database version name.<br/><b>Range</b><br/>N/A</p>          |
| datastore_name         | String | <p><b>Definition</b><br/>Indicates the database name.<br/><b>Range</b><br/>N/A</p>                  |
| description            | String | <p><b>Definition</b><br/>Indicates the parameter template description.<br/><b>Range</b><br/>N/A</p> |

| 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. <b>T</b> is the separator between the calendar and the hourly notation of time. <b>Z</b> indicates the time zone offset.</p> |
| updated   | String | <p><b>Definition</b><br/>Indicates the update time.</p> <p><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.</p>   |

- 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](#).

## 4.12.3 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 new parameter template name must be different from the name of an existing or a default parameter template. Default parameter templates cannot be modified.
- The values of the edited parameters must be within the default value range of the specified database version. For details about the range of parameter values, see "Modifying Parameters" in the *Relational Database Service User Guide*.
- The parameter values to be changed cannot be left blank at the same time.

### URI

- URI format  
PUT /v3/{*project\_id*}/configurations/{*config\_id*}
- Parameter description

**Table 4-238** 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> |

| Parameter | Mandatory | Description                                                                                                                                                         |
|-----------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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/>N/A</p> <p><b>Default Value</b><br/>N/A</p> |

## Request

### NOTICE

At least one parameter in the request body must be specified. Otherwise, the request fails to be delivered.

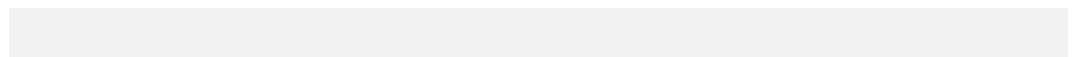
**Table 4-239** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | No        | 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> |

| Parameter   | Mandatory | Type               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------|-----------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 does not support the following special characters: !&lt;&gt;='&amp;"<br/>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>                                                                                                                                                                                                                                                                                                                                                   |
| 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.



```
{
 "name": "configuration_test",
 "description": "configuration_test",
 "values": {
 "div_precision_increment": "6",
 "connect_timeout": "20"
 }
}
```

## Response

- Normal response

**Table 4-240** Parameters

| Parameter     | Type   | Description                                                                                         |
|---------------|--------|-----------------------------------------------------------------------------------------------------|
| configuration | Object | <b>Definition</b><br>Parameter template information. For details, see <a href="#">Table 4-241</a> . |

**Table 4-241** 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](#).

## 4.12.4 Obtaining the Parameter Template of a Specified DB Instance

### Function

This API is used to obtain information about the parameter template of a specified DB instance.

- Before calling 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}/configurations
- Parameter description

**Table 4-242** 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

- Request parameters  
None

## Response

- Normal response

**Table 4-243** Parameters

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

| 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. <b>T</b> is the separator between the calendar and the hourly notation of time. <b>Z</b> indicates the time zone offset.</p> |
| updated                  | String           | <p><b>Definition</b><br/>Indicates the update time.</p> <p><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.</p>   |
| configuration_parameters | Array of objects | <p><b>Definition</b><br/>Indicates the parameters defined by users based on the default parameter templates.</p> <p>For details, see <a href="#">Table 4-244</a>.</p>                                                                                       |

**Table 4-244** configuration\_parameters field data structure description

| Parameter        | Type    | Description                                                                                                                                                                                                                        |
|------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name             | String  | <p><b>Definition</b><br/>Indicates the parameter name.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                             |
| value            | String  | <p><b>Definition</b><br/>Indicates the parameter value.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                            |
| restart_required | Boolean | <p><b>Definition</b><br/>Indicates whether a reboot is required.</p> <p><b>Range</b></p> <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> |

| Parameter   | Type    | Description                                                                                                                                                                                                                                          |
|-------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| readonly    | Boolean | <p><b>Definition</b><br/>Indicates whether the parameter is read-only.</p> <p><b>Range</b></p> <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  | <p><b>Definition</b><br/>Indicates the parameter value range.</p> <p><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>.</p>       |
| type        | String  | <p><b>Definition</b><br/>Indicates the parameter type.</p> <p><b>Range</b><br/>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><br/>Indicates the parameter description.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                        |

- 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](#).

## 4.12.5 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](#).

### URI

- URI format  
GET /v3/{project\_id}/configurations/{config\_id}
- Parameter description

**Table 4-245** 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> |

| Parameter | Mandatory | Description                                                                                                                                                                                                                                                                                                                         |
|-----------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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

## Response

- Normal response

**Table 4-246** Parameters

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

| Parameter                | Type             | Description                                                                                                                                                                                                                                                 |
|--------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| datastore_name           | String           | <p><b>Definition</b><br/>Indicates the database name.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                       |
| description              | String           | <p><b>Definition</b><br/>Indicates the parameter template description.</p> <p><b>Range</b><br/>N/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. <b>T</b> is the separator between the calendar and the hourly notation of time. <b>Z</b> indicates the time zone offset.</p> |
| updated                  | String           | <p><b>Definition</b><br/>Indicates the update time.</p> <p><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.</p>   |
| configuration_parameters | Array of objects | <p><b>Definition</b><br/>Indicates the parameters defined by users based on the default parameter templates.<br/>For details, see <a href="#">Table 4-247</a>.</p>                                                                                          |

**Table 4-247** configuration\_parameters field data structure description

| Parameter        | Type    | Description                                                                                                                                                                                                                                                                        |
|------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name             | String  | <p><b>Definition</b><br/>Indicates the parameter name.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                             |
| value            | String  | <p><b>Definition</b><br/>Indicates the parameter value.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                                                            |
| restart_required | Boolean | <p><b>Definition</b><br/>Indicates whether a restart is required.</p> <p><b>Range</b></p> <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>                |
| readonly         | Boolean | <p><b>Definition</b><br/>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><br/>Indicates the parameter value range.</p> <p><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>.</p>                                     |

| Parameter   | Type   | Description                                                                                                                                          |
|-------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| type        | String | <p><b>Definition</b><br/>Indicates the parameter type.</p> <p><b>Range</b><br/>The value can be <b>string, integer, boolean, list, or float.</b></p> |
| description | String | <p><b>Definition</b><br/>Indicates the parameter description.</p> <p><b>Range</b><br/>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](#).

## 4.12.6 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

- Default parameter templates cannot be deleted.

### URI

- URI format  
DELETE /v3/{project\_id}/configurations/{config\_id}
- Parameter description

**Table 4-248** 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/>Parameter template 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

- Request parameters  
None

## 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](#).

# 4.13 Recycling a DB Instance

## 4.13.1 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 4-249** 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> |

## Request

**Table 4-250** Parameters

| Parameter      | Mandatory | Type   | Description                                                                                                                                                                                |
|----------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| recycle_policy | Yes       | Object | <p><b>Definition</b><br/>Each element is associated with the recycle bin.<br/>For details on the element structure, see <a href="#">Table 4-251</a>.</p> <p><b>Constraints</b><br/>N/A</p> |

**Table 4-251** recycle\_policy elements

| Parameter                | Mandatory | Type   | Description                                                                                                                                                                                                                                                                          |
|--------------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| retention_period_in_days | No        | String | <p><b>Definition</b><br/>Retention days of deleted instances.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value is an integer ranging from 1 to 7.</p> <p><b>Default Value</b><br/>If this parameter is left blank, the retention period is 7 days by default.</p> |

## Example Request

Set the retention period of instances in the recycle bin to one day.

```
{
 "recycle_policy":{
 "retention_period_in_days":"1"
 }
}
```

## Response

- Normal response

**Table 4-252** Parameters

| Parameter | Type   | Description                                                                                                          |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------|
| result    | String | <p><b>Definition</b><br/>Calling result.</p> <p><b>Range</b><br/><b>success:</b> The API is successfully called.</p> |

- 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](#).

# 4.14 Tag Management

## 4.14.1 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 4-253** 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> |

| Parameter   | Mandatory | Description                                                                                                                                 |
|-------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 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 4-254** Parameters

| Parameter | Mandatory | Type             | Description                                                                                                                                                                                                         |
|-----------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| action    | Yes       | String           | <p><b>Definition</b><br/>Operation identifier.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value is case-sensitive and is <b>create</b> for tag creation.</p> <p><b>Default Value</b><br/>N/A</p> |
| tags      | Yes       | Array of objects | <p><b>Definition</b><br/>Tag list. A maximum of 20 tags can be added for each instance.<br/>For details, see <a href="#">Table 4-255</a>.</p> <p><b>Constraints</b><br/>N/A</p>                                     |

**Table 4-255** tags field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | <p><b>Definition</b><br/>Tag key.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value must consist of 1 to 128 Unicode characters. It can contain letters, digits, spaces, and special characters <code>._:=-@()</code>. However, it cannot start or end with a space, or start with <code>_sys_</code>.</p> <p><b>Default Value</b><br/>N/A</p> |
| value     | Yes       | String | <p><b>Definition</b><br/>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. It can contain letters, digits, spaces, and special characters <code>._:=-@()</code>.</p> <p><b>Default Value</b><br/>N/A</p>                                                                 |

### Example Request

Add tags **key1** and **key2** for a DB instance.

```
{
 "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](#).

## 4.14.2 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 4-256** 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 4-257** Parameters

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

| Parameter | Mandatory | Type             | Description                                                                                                                |
|-----------|-----------|------------------|----------------------------------------------------------------------------------------------------------------------------|
| tags      | Yes       | Array of objects | <p><b>Definition</b><br/>Tag list.<br/>For details, see <a href="#">Table 4-258</a>.</p> <p><b>Constraints</b><br/>N/A</p> |

**Table 4-258** tags field data structure description

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                           |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | <p><b>Definition</b><br/>Tag key.</p> <p><b>Constraints</b><br/>N/A</p> <p><b>Range</b><br/>The value must consist of 1 to 128 Unicode characters.<br/>It can contain letters, digits, spaces, and special characters <code>_.:+=-@()</code>. However, it cannot start or end with a space, or start with <code>_sys_</code>.</p> <p><b>Default Value</b><br/>N/A</p> |
| value     | Yes       | String | <p><b>Definition</b><br/>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>                                                                 |

## Example Request

Delete tags **key1** and **key2** from a DB instance.

```
{
 "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](#).

## 4.14.3 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 4-259** 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> |

## Request

- Request parameters  
None

## Response

- Normal response

**Table 4-260** Parameters

| Parameter | Type             | Description                                                                                                                                                        |
|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tags      | Array of objects | <p><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 4-261</a>.</p> |

**Table 4-261** tags field data structure description

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

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

- 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](#).

# 4.15 Obtaining Task Information

## 4.15.1 Obtaining Information About a Task with a Specified ID

### Function

This API is used to obtain information about a task with a specified ID in the task center.

- Before calling 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, and changing an instance class.

## URI

- URI format  
GET /v3/{project\_id}/jobs?id={id}
- Parameter description

**Table 4-262** 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> |
| id         | Yes       | <p><b>Definition</b><br/>Task 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

- Request parameters  
None

## Response

- Normal response

**Table 4-263** Parameters

| Parameter | Type   | Description                                                                                            |
|-----------|--------|--------------------------------------------------------------------------------------------------------|
| job       | Object | <b>Definition</b><br>Indicates the task information.<br>For details, see <a href="#">Table 4-264</a> . |

**Table 4-264** 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.                                                |

| Parameter   | Type   | Description                                                                                                                                                                                                                                                  |
|-------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.</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%") 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.<br/>For details, see <a href="#">Table 4-265</a>.</p>                                                                                                       |
| entities    | Object | <p><b>Definition</b><br/>The displayed information varies depending on the tasks.<br/>For details, see <a href="#">Table 4-266</a>.</p> <p><b>NOTE</b><br/>For asynchronous tasks without the <b>entities</b> field description, {} is returned.</p>         |
| fail_reason | String | <p><b>Definition</b><br/>Indicates the error information displayed when a task failed.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                       |

**Table 4-265** 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 4-266** 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 4-267</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 4-269</a> .                                                                                       |
| public_ip    | String           | <b>Definition</b><br>Indicates the EIP bound to the DB instance.<br><b>Range</b><br>N/A                                                                                                                        |

| Parameter       | Type   | Description                                                                                               |
|-----------------|--------|-----------------------------------------------------------------------------------------------------------|
| switch_strategy | String | <p><b>Definition</b><br/>Indicates the primary/standby switchover policy.</p> <p><b>Range</b><br/>N/A</p> |

**Table 4-267** entities.instance field data structure description

| Parameter  | Type   | Description                                                                                                                                                                                                                                                     |
|------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| endpoint   | String | <p><b>Definition</b><br/>Indicates the DB instance connection address.</p> <p><b>Range</b><br/>N/A</p>                                                                                                                                                          |
| type       | String | <p><b>Definition</b><br/>Indicates the DB 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> </ul> |
| datastore  | Object | <p><b>Definition</b><br/>Indicates the database information. For details, see <a href="#">Table 4-268</a>.</p>                                                                                                                                                  |
| replica_of | String | <p><b>Definition</b><br/>Indicates the primary DB instance ID. This parameter is returned only when a read replica is created.</p> <p><b>Range</b><br/>N/A</p>                                                                                                  |

**Table 4-268** 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 4-269** 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                |
| 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."
}

```

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

## Status Code

- Normal  
200

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

## Error Code

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

# 5 Appendix

## 5.1 Abnormal Request Results

### v3 APIs

#### Abnormal response description

Table 5-1 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."
}
```

## 5.2 Status Codes

[Table 5-2](#) describes status codes.

**Table 5-2** 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.                                                               |

## 5.3 Error Codes

The following table describes error codes.

**Table 5-3** V3 error codes

| Status Code | Error Code | Description                                                                                       |
|-------------|------------|---------------------------------------------------------------------------------------------------|
| 500         | DBS.108000 | Server failure.                                                                                   |
| 500         | DBS.108002 | Server failure.                                                                                   |
| 500         | DBS.108005 | Server failure.                                                                                   |
| 400         | DBS.200001 | Parameter error.                                                                                  |
| 404         | DBS.200002 | The DB instance does not exist.                                                                   |
| 400         | DBS.200004 | Parameter error.                                                                                  |
| 500         | DBS.200005 | Server failure.                                                                                   |
| 400         | DBS.200006 | The request is null. Enter a request parameter.                                                   |
| 404         | DBS.200008 | The ECS information of the DB instance cannot be found.                                           |
| 403         | DBS.200010 | The DB instance ID or user ID may be null, or the operation is not authorized.                    |
| 409         | DBS.200011 | Another operation is being performed on the instance, or the instance is faulty. Try again later. |

| Status Code | Error Code | Description                                                                           |
|-------------|------------|---------------------------------------------------------------------------------------|
| 404         | DBS.200013 | The original DB instance does not exist.                                              |
| 409         | DBS.200019 | Another operation is being performed on the DB instance or the DB instance is faulty. |
| 400         | DBS.200021 | Invalid DB instance name.                                                             |
| 409         | DBS.200022 | The DB instance name already exists.                                                  |
| 400         | DBS.200023 | Storage space is out of range.                                                        |
| 400         | DBS.200024 | Invalid region.                                                                       |
| 400         | DBS.200025 | Invalid AZ.                                                                           |
| 400         | DBS.200026 | Invalid storage type.                                                                 |
| 400         | DBS.200027 | Storage space must be a multiple of 10.                                               |
| 400         | DBS.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.                      |
| 400         | DBS.200051 | Invalid HA mode.                                                                      |
| 400         | DBS.200052 | Invalid database root password.                                                       |
| 400         | DBS.200053 | The selected specifications do not exist.                                             |

| Status Code | Error Code | Description                                                                                       |
|-------------|------------|---------------------------------------------------------------------------------------------------|
| 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.                                                                                |
| 400         | DBS.200405 | Parameter error.                                                                                  |
| 404         | DBS.200408 | Incorrect node information.                                                                       |
| 400         | DBS.200461 | The parameter value is out of range.                                                              |

| Status Code | Error Code | Description                                                                    |
|-------------|------------|--------------------------------------------------------------------------------|
| 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.                                                            |
| 404         | DBS.201010 | The backup information does not exist.                                         |
| 400         | DBS.201014 | This operation is not allowed by the DB instance status.                       |

| Status Code | Error Code | Description                                                                           |
|-------------|------------|---------------------------------------------------------------------------------------|
| 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.                                                         |
| 404         | DBS.212013 | The object does not exist.                                                            |
| 400         | DBS.212014 | The node does not have a default parameter template.                                  |

| Status Code | Error Code | Description                                                                                       |
|-------------|------------|---------------------------------------------------------------------------------------------------|
| 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.                                                        |
| 400         | DBS.280239 | Invalid specifications.                                                                           |
| 400         | DBS.280241 | Invalid storage type.                                                                             |

| Status Code | Error Code | Description                                              |
|-------------|------------|----------------------------------------------------------|
| 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.                                |
| 400         | DBS.280461 | Invalid number of added shards.                          |

| Status Code | Error Code | Description                                                                                                  |
|-------------|------------|--------------------------------------------------------------------------------------------------------------|
| 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.301132 | This operation cannot be performed because instance has been stopped.                                        |
| 400         | DBS.301133 | This operation cannot be performed because instance has been started.                                        |

## 5.4 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 IAM API used to query project information based on the specified criteria.

The API used to obtain a project ID is **GET https://{Endpoint}/v3/projects**. *{Endpoint}* is the IAM endpoint and can be obtained from the administrator. For details about API authentication, see [Authentication](#).

The following is an example response. The value of **id** is the project ID.

```
{
 "projects": [
 {
 "domain_id": "65382450e8f64ac0870cd180d14e684b",
 "is_domain": false,
 "parent_id": "65382450e8f64ac0870cd180d14e684b",
 "name": "project_name",
 "description": "",
 "links": {
 "next": null,
 "previous": null,
 "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
 },
 "id": "a4a5d4098fb4474fa22cd05f897d6b99",
 "enabled": true
 }
],
 "links": {
 "next": null,
 "previous": null,
 "self": "https://www.example.com/v3/projects"
 }
}
```

## Obtaining a Project ID from the Console

**Step 1** Register yourself on the management console and log in to it.

**Step 2** Move your pointer over the username and select **My Credentials** in the displayed drop-down list.

On the **My Credential** page, view project IDs in the project list.

----End

## 5.5 Replication Mode

Replication mode

| Replication Mode | Description      | Remarks |
|------------------|------------------|---------|
| async            | Asynchronous     | N/A     |
| semisync         | Semi-synchronous | N/A     |
| sync             | Synchronous      | N/A     |

## 5.6 RDS Monitoring Metrics Description

### Function Description

This section describes namespaces, descriptions, and dimensions of monitoring metrics reported to Cloud Eye. You can query monitoring metrics and alarm information over the Cloud Eye API.

### Namespace

SYS.RDS

### Monitoring Metrics

**Table 5-4** RDS performance metrics

| Metric ID          | Name         | Description                                                                  | Value Range  | Monitored Object and Instance Type                                                                                                                              |
|--------------------|--------------|------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rds001_cpu_util    | CPU Usage    | CPU usage of the monitored object                                            | 0%–100%      | Monitored object: ECS.<br>Monitored DB instance type: <ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>Microsoft SQL Server</li> </ul> |
| rds002_memory_util | Memory Usage | Memory usage of the monitored object                                         | 0-100%       | Monitored object: ECS.<br>Monitored DB instance type: <ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>Microsoft SQL Server</li> </ul> |
| 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 DB instance type: <ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>Microsoft SQL Server</li> </ul> |

| Metric ID                | Name                       | Description                                                                       | Value Range             | Monitored Object and Instance Type                                                                                                                                 |
|--------------------------|----------------------------|-----------------------------------------------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rds004_bytes_in          | Network Input Throughput   | Incoming traffic in bytes per second                                              | $\geq 0$ bytes/s        | Monitored object: ECS.<br>Monitored DB instance type:<br><ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>Microsoft SQL Server</li> </ul> |
| rds005_bytes_out         | Network Output Throughput  | Outgoing traffic in bytes per second                                              | $\geq 0$ bytes/s        | Monitored object: ECS.<br>Monitored DB instance type:<br><ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>Microsoft SQL Server</li> </ul> |
| rds006_conn_count        | Total Connections          | Total number of connections that attempt to connect to the MySQL server           | $\geq 0$ counts         | Monitored object: database<br>Monitored instance type: MySQL instances                                                                                             |
| rds007_conn_active_count | Current Active Connections | Number of current active connections                                              | $\geq 0$ counts         | Monitored object: database<br>Monitored instance type: MySQL instances                                                                                             |
| rds008_qps               | QPS                        | Query times of SQL statements (including storage procedures) per second           | $\geq 0$ queries/s      | Monitored object: database<br>Monitored instance type: MySQL instances                                                                                             |
| rds009_tps               | TPS                        | Execution times of submitted and rollback transactions per second                 | $\geq 0$ transactions/s | Monitored object: database<br>Monitored instance type: MySQL instances                                                                                             |
| rds010_innodb_buf_usage  | Buffer Pool Usage          | Ratio of idle pages to the total number of buffer pool pages in the InnoDB buffer | 0-1                     | Monitored object: database<br>Monitored instance type: MySQL instances                                                                                             |
| rds011_innodb_buf_hit    | Buffer Pool Hit Rate       | Ratio of read hits to read requests in the InnoDB buffer                          | 0-1                     | Monitored object: database<br>Monitored instance type: MySQL instances                                                                                             |

| Metric ID                              | Name                                 | Description                                                            | Value Range  | Monitored Object and Instance Type                                     |
|----------------------------------------|--------------------------------------|------------------------------------------------------------------------|--------------|------------------------------------------------------------------------|
| rds012_innodb_buf_dirty                | Buffer Pool Dirty Block Rate         | Ratio of dirty data to used pages in the InnoDB buffer                 | 0-1          | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds013_innodb_reads                    | InnoDB Read Throughput               | Number of read bytes per second in the InnoDB buffer                   | ≥ 0 bytes/s  | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds014_innodb_writes                   | InnoDB Write Throughput              | Number of write bytes per second in the InnoDB buffer                  | ≥ 0 bytes/s  | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds015_innodb_read_count               | InnoDB File Read Frequency           | Number of times that InnoDB reads data from files per second           | ≥ 0 counts/s | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds016_innodb_write_count              | InnoDB File Write Frequency          | Number of times that InnoDB writes data to files per second            | ≥ 0 counts/s | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds017_innodb_log_write_req_count      | InnoDB Log Write Requests per Second | Number of InnoDB log write requests per second                         | ≥ 0 counts/s | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds018_innodb_log_physical_write_count | InnoDB Log Physical Write Frequency  | Number of InnoDB physical write times to log files per second          | ≥ 0 counts/s | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds019_innodb_log_fsync_count          | InnoDB Log fsync() Write Frequency   | Number of completed fsync() write times to InnoDB log files per second | ≥ 0 counts/s | Monitored object: database<br>Monitored instance type: MySQL instances |

| Metric ID                      | Name                                         | Description                                                                   | Value Range   | Monitored Object and Instance Type                                     |
|--------------------------------|----------------------------------------------|-------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------|
| rds020_temp_tbl_rate           | Temporary Tables Created per Second          | Number of temporary tables created on hard disks per second                   | ≥ 0 counts /s | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds021_myisam_buf_usage        | Key Buffer Usage                             | MyISAM key buffer usage                                                       | 0-1           | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds022_myisam_buf_write_hit    | Key Buffer Write Hit Ratio                   | MyISAM key buffer write hit ratio                                             | 0-1           | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds023_myisam_buf_read_hit     | Key Buffer Read Hit Ratio                    | MyISAM key buffer read hit ratio                                              | 0-1           | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds024_myisam_disk_write_count | MyISAM Disk Write Frequency                  | Number of times that indexes are written to disks per second                  | ≥ 0 counts /s | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds025_myisam_disk_read_count  | MyISAM Disk Read Frequency                   | Number of times that indexes are read from disks per second                   | ≥ 0 counts /s | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds026_myisam_buf_write_count  | MyISAM Buffer Pool Write Requests per Second | Number of requests for writing indexes into the MyISAM buffer pool per second | ≥ 0 counts /s | Monitored object: database<br>Monitored instance type: MySQL instances |

| Metric ID                            | Name                                        | Description                                                                   | Value Range   | Monitored Object and Instance Type                                     |
|--------------------------------------|---------------------------------------------|-------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------|
| rds027_myisam_buffer_read_count      | MyISAM Buffer Pool Read Requests per Second | Number of requests for reading indexes from the MyISAM buffer pool per second | ≥ 0 counts/s  | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds028_cmdml_delete_count            | DELETE Statements per Second                | Number of DELETE statements executed per second                               | ≥ 0 queries/s | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds029_cmdml_insert_count            | INSERT Statements per Second                | Number of INSERT statements executed per second                               | ≥ 0 queries/s | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds030_cmdml_insert_select_count     | INSERT_SELECT Statements per Second         | Number of INSERT_SELECT statements executed per second                        | ≥ 0 queries/s | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds031_cmdml_replace_count           | REPLACE Statements per Second               | Number of REPLACE statements executed per second                              | ≥ 0 queries/s | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds032_cmdml_replace_selection_count | REPLACE_SELECTION Statements per Second     | Number of REPLACE_SELECTION statements executed per second                    | ≥ 0 queries/s | Monitored object: database<br>Monitored instance type: MySQL instances |
| rds033_cmdml_select_count            | SELECT Statements per Second                | Number of SELECT statements executed per second                               | ≥ 0 queries/s | Monitored object: database<br>Monitored instance type: MySQL instances |

| Metric ID                      | Name                         | Description                                              | Value Range   | Monitored Object and Instance Type                                                                                                                                 |
|--------------------------------|------------------------------|----------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rds034_comdml_updated_count    | UPDATE Statements per Second | Number of UPDATE statements executed per second          | ≥ 0 queries/s | Monitored object: database<br>Monitored instance type: MySQL instances                                                                                             |
| rds035_innodb_delete_row_count | Row Delete Frequency         | Number of rows deleted from the InnoDB table per second  | ≥ 0 rows/s    | Monitored object: database<br>Monitored instance type: MySQL instances                                                                                             |
| rds036_innodb_insert_row_count | Row Insert Frequency         | Number of rows inserted into the InnoDB table per second | ≥ 0 rows/s    | Monitored object: database<br>Monitored instance type: MySQL instances                                                                                             |
| rds037_innodb_read_row_count   | Row Read Frequency           | Number of rows read from the InnoDB table per second     | ≥ 0 rows/s    | Monitored object: database<br>Monitored instance type: MySQL instances                                                                                             |
| rds038_innodb_update_row_count | Row Update Frequency         | Number of rows updated into the InnoDB table per second  | ≥ 0 rows/s    | Monitored object: database<br>Monitored instance type: MySQL instances                                                                                             |
| rds039_disk_util               | Storage Space Usage          | Storage space usage of the monitored object              | 0-100 %       | Monitored object: ECS.<br>Monitored DB instance type:<br><ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>Microsoft SQL Server</li> </ul> |
| rds040_transaction_logs_usage  | Transaction Logs Usage       | Storage space usage of transaction logs                  | ≥ 0 MB        | Monitored object: database<br>Monitored instance type: PostgreSQL instances                                                                                        |
| rds041_replication_slot_usage  | Replication Slot Usage       | Storage space usage of replication slot files            | ≥ 0 MB        | Monitored object: database<br>Monitored instance type: PostgreSQL instances                                                                                        |

| Metric ID                           | Name                         | Description                                                            | Value Range | Monitored Object and Instance Type                                                                                                                              |
|-------------------------------------|------------------------------|------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rds042_database_connections         | Database Connections in Use  | Number of database connections in use                                  | ≥ 0 counts  | Monitored object: database<br>Monitored instance type: PostgreSQL instances                                                                                     |
| rds043_maximum_used_transaction_ids | Maximum Used Transaction IDs | Maximum number of transaction IDs that have been used                  | ≥ 0 counts  | Monitored object: database<br>Monitored instance type: PostgreSQL instances                                                                                     |
| rds044_transaction_logs_generations | Transaction Logs Generation  | Size of transaction logs generated per second                          | ≥ 0 MB/s    | Monitored object: database<br>Monitored instance type: PostgreSQL instances                                                                                     |
| rds045_oldest_replication_slot_lag  | Oldest Replication Slot Lag  | Lagging size of the most lagging replica in terms of WAL data received | ≥ 0 MB      | Monitored object: database<br>Monitored instance type: PostgreSQL instances                                                                                     |
| rds046_replication_lag              | Replication Lag              | Replication lag delay                                                  | ≥ 0 ms      | Monitored object: database<br>Monitored instance type: PostgreSQL instances                                                                                     |
| rds047_disk_total_size              | Total Storage Space          | Total storage space of the monitored object                            | 40–4,000 GB | Monitored object: ECS.<br>Monitored DB instance type: <ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>Microsoft SQL Server</li> </ul> |
| rds048_disk_used_size               | Used Storage Space           | Used storage space of the monitored object                             | 0–4,000 GB  | Monitored object: ECS.<br>Monitored DB instance type: <ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>Microsoft SQL Server</li> </ul> |

| Metric ID                    | Name                        | Description                                      | Value Range | Monitored Object and Instance Type                                                                                                                              |
|------------------------------|-----------------------------|--------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rds049_disk_read_throughput  | Disk Read Throughput        | Number of bytes read from the disk per second    | ≥ 0 bytes/s | Monitored object: ECS.<br>Monitored DB instance type: <ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>Microsoft SQL Server</li> </ul> |
| rds050_disk_write_throughput | Disk Write Throughput       | Number of bytes written into the disk per second | ≥ 0 bytes/s | Monitored object: ECS.<br>Monitored DB instance type: <ul style="list-style-type: none"> <li>MySQL</li> <li>PostgreSQL</li> <li>Microsoft SQL Server</li> </ul> |
| rds054_db_connections_in_use | Database Connections in Use | Number of database connections in use            | ≥ 0 counts  | Monitored object: database<br>Monitored instance type: Microsoft SQL Server instances                                                                           |

## Dimension

| Key                      | Value                             |
|--------------------------|-----------------------------------|
| rds_cluster_id           | RDS for MySQL DB instance ID      |
| postgresql_cluster_id    | RDS for PostgreSQL DB instance ID |
| rds_cluster_sqlserver_id | RDS for SQL Server DB instance ID |

## API Calling

Use APIs to search for RDS monitoring metrics. For details about calling methods and parameter description, see *Querying Monitoring Data* in the *Cloud Eye API Reference*.

Examples:

- Request

```
/V1.0/{project_id}/metric-data?
namespace=SYS.RDS&metric_name=rds001_cpu_util&dim.0=rds_cluster_id,5ea170ad-
cc6b-49cd-9020-
e94fdbeea391&from=1484123686000&to=1568188853000&period=300&filter=average
```

- Response:

```
{
 "datapoints": [
 {
 "average": 0.35,
 "timestamp": 1484123400000,
 "unit": "Ratio"
 },
 {
 "average": 0.11,
 "timestamp": 1484123700000,
 "unit": "Ratio"
 }
],
 "metric_name": "rds001_cpu_util",
 "httpcode" : 200,
 "header" : {
 "Transfer-Encoding" : "chunked",
 "Server" : "Web Server",
 "X-Request-Id" : "te-l-CES-
APISVR25.id-0418d62a-1e76-46ff-9a5f-9ce40b336e29.ts-1484123744291.c-15046",
 "X-Content-Type-Options" : "nosniff",
 "Connection" : "keep-alive",
 "X-Download-Options" : "noopen",
 "Date" : "Wed, 11 Jan 2017 08:35:44 GMT",
 "X-Frame-Options" : "DENY",
 "Strict-Transport-Security" : "max-age=31536000; includeSubdomains;",
 "Cache-Control" : "no-cache",
 "X-XSS-Protection" : "1; mode=block;",
 "Content-Length" : "165",
 "Content-Type" : "application/json"
 }
}
```