

GaussDB(for MySQL)

API Reference

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1 Before You Start

1.1 Overview

GaussDB(for MySQL) is a MySQL-compatible, enterprise-grade distributed database service. It uses a compute-storage decoupled architecture and supports up to 128 TB of storage. With GaussDB(for MySQL), there is no need to do sharding, and no need to worry about data loss. It provides superior performance of commercial databases at the price of open-source databases.

 **NOTE**

Data Function Virtualization (DFV) is a high-performance and high-reliability distributed storage system that is vertically integrated with databases. Storage clusters are deployed in pools to improve storage utilization.

This document describes how to use application programming interfaces (APIs) to perform operations on DB instances. For details about all supported operations, see [API Overview](#).

1.2 API Calling

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

1.3 Endpoints

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions.

1.4 Constraints

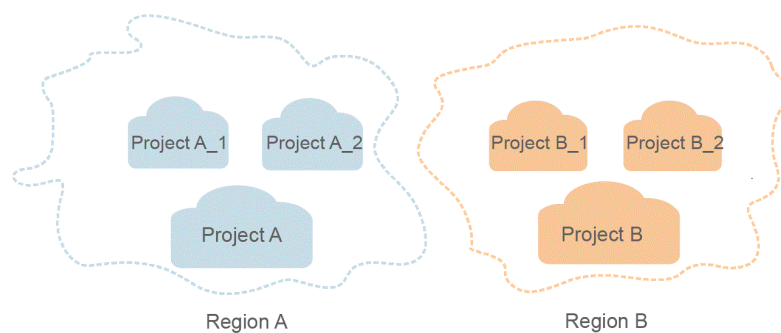
- The number of DB instances that you can create is determined by your quota. To view or increase the quota, see "Managing Quotas" in the *GaussDB(for MySQL) User Guide*.

- For more constraints, see API description.

1.5 Concepts

- Account
An account is created upon successful registration. An 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 users and grant them permissions for routine management.
- IAM User
An IAM user is created by an account to use cloud services. Each IAM user has its own identity credentials (password and access keys).
API authentication requires information such as the account, username, and password.
- Region
A region is a geographic area in which cloud resources are deployed. Availability zones (AZs) in the same region can communicate with each other over an intranet, while AZs in different regions are isolated from each other. Deploying cloud resources in different regions can better suit certain user requirements or comply with local laws or regulations.
- AZ
An AZ 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 compute, storage, and network resources across physical regions. A default project is provided for each region, and subprojects can be created under each default project. Users can be granted permissions to access all resources in a specific project. For more refined access control, create subprojects under a project and purchase resources in the subprojects. Users can then be assigned permissions to access only specific resources in the subprojects.

Figure 1-1 Project isolating model



- Enterprise Project
Enterprise projects group and manage resources across regions. Resources in enterprise projects are logically isolated from each other. An enterprise project can contain resources in multiple regions, and resources can be directly transferred between enterprise projects.

2 API Overview

With GaussDB(for MySQL) APIs, you can query, set, and modify resource quotas.

Type	Description
DB engine version query	Query the DB version information of a specified DB engine.
DB specifications query	Query the DB specifications of a specified DB engine version.
DB instance management	Create instances, query instance lists, query instance details, delete instances, create read replicas, delete read replicas, scale storage space of yearly/monthly instances, change instance names, reset database passwords, and change instance specifications.
Backup management	Create manual backups, query backup lists, query automated backup policies, and modify automated backup policies.
Parameter template management	Query parameter templates.
Quota management	Query, set, and modify resource quotas.
Log management	Obtain log information, including database error logs and slow logs.
Tag management	Manage tags, including adding tags in batches, deleting tags in batches, and querying project tags.
Task information query	Obtain task information about the task center.

3 Calling APIs

3.1 Making an API Request

This section describes the structure of a REST API, and uses the IAM API for **obtaining a user token** as an example to describe how to call an API. The obtained token is used to authenticate the calling of other APIs.

Request URI

A request URI 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.

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>

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

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

The request body varies between APIs. Some 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. It can be obtained 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": "xxxxxxx"
    }
  }
}
```

```
}  
}
```

In **Making an API Request**, the process of calling the API used to **obtain a user token** is described.

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

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

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  
→ MIIVXQYJKoZIhvcNAQcCoIIYJCCEoCAQExDTALBgIghkgBZQMEAgEwgharBgkqhkiG9w0BBwGgghacBIIIWmHsidG9rZW4iOnsiZXhwaXJlc19hdCI6ijwMTktMDItMTNUMC  
fj3KJs6YgKnpVNRbW2eZ5eb78SZOkqjACgkklQ1wi4JlGzrpd18LGXK5tdfdq4lqHCYb8P4NaY0NYejcAgzIVeFYtLWT1GS00zxKZmlQHqj82HBqHdglZO9fuEbL5dMhdavj+33wEI  
xHRCe9I87o+k9-  
j+CMZSEB7bUGd5Uj6eRASXI1jipPEGA270g1FruooL6jgglFkNPQuFSOU8+uSsttVwRtNfsC+qTp22Rkd5MCqFGQ8LcuXc3a+9CMBnOintWW7oeRUVhVpxk8pxiX1wTEboX-  
RzT6MUbvpvGw-oPNFYjJECKnoH3HRozv0wN--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 APIs (Recommended)

4.1 DB Engine Version Queries

4.1.1 Querying Version Information About a DB Engine

Function

This API is used to query the version information of a specified DB engine. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/datastores/{database_name}

Table 4-1 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
database_name	Yes	String	DB engine. Its value is case-insensitive and can be: gaussdb-mysql .

Request Parameters

Table 4-2 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-3 Response body parameters

Parameter	Type	Description
datastores	Array of MysqlEngineVersionInfo objects	DB versions.

Table 4-4 MysqlEngineVersionInfo

Parameter	Type	Description
id	String	DB version ID. Its value is unique.
name	String	DB version number. Only the major version number with two digits is returned.

Status code: 400

Table 4-5 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-6** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying version information about a GaussDB(for MySQL) instance

```
GET https://{endpoint}/v3/619d3e78f61b4be68bc5aa0b59edcf7b/datastores/gaussdb-mysql
```

Example Response

Status code: 200

Success.

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

Status Code

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

Error Code

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

4.2 Database Specification Queries

4.2.1 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 [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/flavors/{database_name}

Table 4-7 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
database_name	Yes	String	Database name.

Table 4-8 Query parameters

Parameter	Mandatory	Type	Description
version_name	No	String	DB version number. To obtain this value, see Querying Version Information About a DB Engine . Currently, only MySQL 8.0 is supported.
availability_zone_mode	Yes	String	AZ mode. Its value is case-insensitive and can be: <ul style="list-style-type: none">• single: single AZ• multi: multiple AZs
spec_code	No	String	Specification code.

Request Parameters

Table 4-9 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 202

Table 4-10 Response body parameters

Parameter	Type	Description
flavors	Array of MysqlFlavorsInfo objects	Instance specifications.

Table 4-11 MysqlFlavorsInfo

Parameter	Type	Description
vcpus	String	Number of vCPUs. For example, the value 1 indicates 1 vCPU.
ram	String	Memory size in GB.
type	String	CPU architecture. Value: <ul style="list-style-type: none">• arm: exclusive Arm• x86: exclusive x86

Parameter	Type	Description
id	String	Specification ID. The value must be unique.
spec_code	String	Resource specification code. Its value is same as the value of flavor_ref . For example: gaussdb.mysql.xlarge.x86.4.
version_name	String	DB version number.
instance_mode	String	DB instance type. Currently, only the cluster type is supported.
az_status	Map<String,String>	Status of the AZ where the specification belongs. Its value can be any of the following: <ul style="list-style-type: none">● normal: on sale● unsupported: not supported● sellout: sold out

Status code: 400**Table 4-12** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-13** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying specific specifications of a GaussDB(for MySQL) instance

```
GET https://{endpoint}/v3/0483b6b16e954cb88930a360d2c4e663/flavors/gaussdb-mysql?version_name=8.0&spec_code=gaussdb.mysql.xlarge.x86.4&availability_zone_mode=single
```

Example Response**Status code: 202**

Success.

```
{
  "flavors": [ {
    "vcpus": "4",
    "ram": "16",
    "type": "x86",
    "id": "3169caaf-6c2f-41d5-aadd-c8fc3d83597e",
    "spec_code": "gaussdb.mysql.xlarge.x86.4",
    "instance_mode": "Cluster",
    "version_name": "8.0",
    "az_status": {
      "az1": "normal",
      "az2": "normal"
    }
  }
]
```

Status Code

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

Error Code

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

4.3 Instance Management

4.3.1 Creating a DB Instance

Function

This API is used to create a GaussDB(for MySQL) DB instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

POST /v3/{project_id}/instances

Table 4-14 URI parameters

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

Request Parameters

Table 4-15 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-16 Request body parameters

Parameter	Mandatory	Type	Description
charge_info	No	MysqlCharge Info object	Billing mode, which is yearly/ monthly or pay-per-use (default setting).
region	Yes	String	Region ID. The value cannot be empty. Obtain the parameter value from the enterprise administrator.
name	Yes	String	DB instance name. Instances of the same type can have same names under the same tenant. The value must be 4 to 64 characters in length and start with a letter. It is case-sensitive and can contain only letters, digits, hyphens (-), and underscores (_).
datastore	Yes	MysqlDatastore object	Database information.

Parameter	Mandatory	Type	Description
mode	Yes	String	Instance type. Currently, only the cluster type is supported.
flavor_ref	Yes	String	Specification code.
vpc_id	Yes	String	VPC ID. To obtain this value, use either of the following methods: <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 "Querying VPCs" in the <i>Virtual Private Cloud API Reference</i>.
subnet_id	Yes	String	Network ID. To obtain this value, use either of the following methods: <ul style="list-style-type: none">• Method 1: Log in to the VPC console and click the target subnet on the Subnets page. You can view the network ID on the displayed page.
security_group_id	No	String	Security group ID. If network ACL is enabled, this parameter cannot be specified. If network ACL is disabled, this parameter is mandatory. <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 "Querying Security Groups" in the <i>Virtual Private Cloud API Reference</i>.
configuration_id	No	String	Parameter template ID.

Parameter	Mandatory	Type	Description
password	Yes	String	Database password. The password consists of 8 to 32 characters and contains at least three types of the following: uppercase letters, lowercase letters, digits, and special characters (~!@#\$\$%^*_-=+?,)&). You are advised to enter a strong password to improve security and prevent security risks such as brute force cracking. If you enter a weak password, the system automatically determines that the password is invalid.
backup_strategy	No	MysqlBackupStrategy object	Automated backup policy.
time_zone	No	String	Time zone. The default time zone is UTC.
availability_zone_mode	Yes	String	AZ type. The value can be single or multi .
master_availability_zone	No	String	Primary AZ. <ul style="list-style-type: none">• If availability_zone_mode is set to multi, this parameter is mandatory.• If availability_zone_mode is set to single, this parameter cannot be specified.
slave_count	Yes	Integer	Number of read replicas. A maximum of nine read replicas can be created at a time.

Parameter	Mandatory	Type	Description
tags	No	Array of MysqlTags objects	Tag list. Instances are created based on tag keys and values. <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. To create instances with multiple tag keys and values, separate key-value pairs with commas (.). Up to 10 key-value pairs can be added.
enterprise_project_id	No	String	Enterprise project ID. This parameter is mandatory when the enterprise project is enabled.
dedicated_resource_id	No	String	Dedicated resource pool ID. This parameter is displayed only when the dedicated resource pool is enabled.
restore_point	No	MysqlRestorePoint object	Backup information.

Table 4-17 MysqlChargeInfo

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

Parameter	Mandatory	Type	Description
period_type	No	String	<p>Subscription period.</p> <p>Valid value:</p> <ul style="list-style-type: none"> • month: The service is subscribed by month. • year: The service is subscribed by year. <p>NOTE This parameter is valid and mandatory if charge_mode is set to prePaid.</p>
period_num	No	Integer	<p>Subscription duration. This parameter is valid and mandatory if charge_mode is set to prePaid.</p> <p>Valid value:</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 ranges from 1 to 3.
is_auto_renew	No	String	<p>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 during the subscription renewal.</p> <ul style="list-style-type: none"> • true: indicates that automatic renewal is enabled. • false: indicates that automatic renewal is disabled. The default value is false.

Parameter	Mandatory	Type	Description
is_auto_pay	No	String	<p>Whether the order will be automatically paid after yearly/monthly instances are created. This parameter does not affect the payment method of automatic renewal.</p> <ul style="list-style-type: none"> • true: indicates the order will be automatically paid. • false: indicates the order will be manually paid. The default value is false.

Table 4-18 MysqlDatastore

Parameter	Mandatory	Type	Description
type	Yes	String	DB engine. Currently, only gaussdb-mysql is supported.

Table 4-19 MysqlBackupStrategy

Parameter	Mandatory	Type	Description
start_time	Yes	String	<p>Automated backup start time. The automated backup will be triggered within one hour after the time specified by this parameter.</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"> • The HH value must be 1 greater than the hh value. • The values of mm and MM must be the same and must be set to 00. <p>Example value: 21:00-22:00</p>
keep_days	No	String	Retention period of automated backups. Value: 1 to 732

Table 4-20 MysqlVolume

Parameter	Mandatory	Type	Description
size	Yes	String	Disk size. The default value is 40 GB. Value: 40 to 128000 . The value must be a multiple of 10.

Table 4-21 MysqlTags

Parameter	Mandatory	Type	Description
key	Yes	String	Tag key. It contains a maximum of 36 Unicode characters. The value cannot be an empty string, a space, or left blank. Only uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_) are allowed.
value	Yes	String	Tag value. It contains a maximum of 43 Unicode characters. It can be an empty string. Only uppercase letters, lowercase letters, digits, periods (.), hyphens (-), and underscores (_) are allowed.

Table 4-22 MysqlRestorePoint

Parameter	Mandatory	Type	Description
restore_time	No	Long	Point in time that data is restored to.
source_instance_id	Yes	String	Source instance ID.
backup_id	No	String	Backup file ID.

Parameter	Mandatory	Type	Description
type	No	String	Backup type. <ul style="list-style-type: none"> If this parameter is left blank, backup_id cannot be left blank and data is restored using backup files by default. When the parameter is not empty, the value can be: <ul style="list-style-type: none"> backup: indicates that data is restored using backup files. timestamp: indicates that data is restored to a specified point of time.

Response Parameters

Status code: 201

Table 4-23 Response body parameters

Parameter	Type	Description
instance	MysqlInstanceResponse object	Instance information.
job_id	String	ID of the task for creating a DB instance. This parameter is returned only when pay-per-use DB instances are created.
order_id	String	Order ID. This parameter is returned only when yearly/monthly instances are created.

Table 4-24 MysqlInstanceResponse

Parameter	Type	Description
id	String	Instance ID.
name	String	DB instance name. Instances of the same type can have same names under the same tenant. The name can consist of 4 to 64 characters and must start with a letter. It is case-insensitive and can contain only letters, digits, hyphens (-), and underscores (_).

Parameter	Type	Description
status	String	DB instance status. This parameter is returned only when pay-per-use DB instances are created.
datastore	MysqlDatastore object	Database information.
mode	String	DB instance type. Currently, only the cluster type is supported.
configuration_id	String	Parameter template ID.
port	String	Database port.
backup_strategy	MysqlBackupStrategy object	Automated backup policy.
enterprise_project_id	String	Enterprise project ID.
region	String	Region ID, which is the same as the request parameter.
availability_zone_mode	String	AZ mode, which is the same as the request parameter.
master_availability_zone	String	Primary AZ ID.
vpc_id	String	VPC ID, which is the same as the request parameter.
security_group_id	String	Security group ID, which is the same as the request parameter.
subnet_id	String	Subnet ID, which is the same as the request parameter.
flavor_ref	String	Specification code, which is the same as the request parameter.
charge_info	MysqlChargeInfo object	Billing mode, which is yearly/monthly or pay-per-use.

Table 4-25 MysqlDatastore

Parameter	Type	Description
type	String	DB engine. Currently, only gaussdb-mysql is supported.

Parameter	Type	Description
version	String	DB version. A two-digit major version is returned. For details about how to obtain the version, see the name field returned by the Querying Version Information About a DB Engine .

Table 4-26 MysqlBackupStrategy

Parameter	Type	Description
start_time	String	Automated backup start time. The automated backup will be triggered within one hour after the time specified by this parameter. 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. 1. The HH value must be 1 greater than the hh value. 2. The values of mm and MM must be the same and must be set to 00 .
keep_days	String	Automated backup retention days. Value: 1-732.

Table 4-27 MysqlChargeInfo

Parameter	Type	Description
charge_mode	String	Billing mode, which is yearly/monthly or pay-per-use.
period_type	String	Subscription period. Valid value: <ul style="list-style-type: none"> ● month: The service is subscribed by month. ● year: The service is subscribed by year. This parameter is valid and mandatory only when charge_mode is set to prePaid . Valid value: <ul style="list-style-type: none"> ● month ● year

Parameter	Type	Description
period_num	Integer	This parameter is valid and mandatory only when charge_mode is set to prePaid . Valid value: <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 ranges from 1 to 3.
is_auto_renew	String	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 during the subscription renewal. <ul style="list-style-type: none">• true: indicates that automatic renewal is enabled.• false: indicates that automatic renewal is disabled. The default value is false.
is_auto_pay	String	Whether the order will be automatically paid after yearly/monthly instances are created. This parameter does not affect the payment method of automatic renewal. <ul style="list-style-type: none">• true: indicates the order will be automatically paid from your account. The default value is true.• false: indicates the order will be manually paid.

Status code: 400**Table 4-28** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-29** Response body parameters

Parameter	Type	Description
error_code	String	Error code.

Parameter	Type	Description
error_msg	String	Error message.

Example Request

NOTE

The value of **region** is used as an example.

- Creating a DB instance billed at a pay-per-use basis (An automated backup is created during 08:00-09:00.)

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances
{
  "name": "gaussdb-mysql-instance1",
  "region": "br-iaas-odin1",
  "charge_info": {
    "charge_mode": "postPaid"
  },
  "datastore": {
    "type": "gaussdb-mysql",
    "version": "8.0"
  },
  "mode": "Cluster",
  "flavor_ref": "gaussdb.mysql.xlarge.arm.4",
  "vpc_id": "3cedfc54-b105-4652-a4e0-847b11576b58",
  "subnet_id": "c1cfa53c-65d3-431e-8552-326bf310c7ad",
  "security_group_id": "fc577a1a-f202-424a-977f-24faec3fdd55",
  "configuration_id": "43570e0de32e40c5a15f831aa5ce4176pr07",
  "password": "xxxx",
  "backup_strategy": {
    "start_time": "08:00-09:00"
  },
  "availability_zone_mode": "single",
  "slave_count": 1,
  "enterprise_project_id": 0
}
```

- Restoring data to a new pay-per-use DB instance using backups

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances
{
  "name": "gaussdb-mysql-instance2",
  "region": "br-iaas-odin1",
  "charge_info": {
    "charge_mode": "postPaid"
  },
  "datastore": {
    "type": "gaussdb-mysql",
    "version": "8.0"
  },
  "mode": "Cluster",
  "flavor_ref": "gaussdb.mysql.xlarge.arm.4",
  "vpc_id": "3cedfc54-b105-4652-a4e0-847b11576b58",
  "subnet_id": "c1cfa53c-65d3-431e-8552-326bf310c7ad",
  "security_group_id": "fc577a1a-f202-424a-977f-24faec3fdd55",
  "configuration_id": "43570e0de32e40c5a15f831aa5ce4176pr07",
  "password": "xxxx",
  "backup_strategy": {
    "start_time": "08:00-09:00"
  },
  "availability_zone_mode": "single",
  "slave_count": 1,
  "enterprise_project_id": 0,
}
```

```
"restore_point" : {  
  "source_instance_id" : "7033e7c3cf93438797d44ad7ae0a7d95in07",  
  "backup_id" : "7ffbf305376b4cbea0ae491257b6aaf9br07",  
  "type" : "backup"  
}  
}
```

- Restoring data to a new pay-per-use instance through PITR

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances  
{  
  "name" : "gaussdb-mysql-instance3",  
  "region" : "br-iaas-odin1",  
  "charge_info" : {  
    "charge_mode" : "postPaid"  
  },  
  "datastore" : {  
    "type" : "gaussdb-mysql",  
    "version" : "8.0"  
  },  
  "mode" : "Cluster",  
  "flavor_ref" : "gaussdb.mysql.xlarge.arm.4",  
  "vpc_id" : "3cedfc54-b105-4652-a4e0-847b11576b58",  
  "subnet_id" : "c1cfa53c-65d3-431e-8552-326bf310c7ad",  
  "security_group_id" : "fc577a1a-f202-424a-977f-24faec3fdd55",  
  "configuration_id" : "43570e0de32e40c5a15f831aa5ce4176pr07",  
  "password" : "xxxxx",  
  "backup_strategy" : {  
    "start_time" : "08:00-09:00"  
  },  
  "availability_zone_mode" : "single",  
  "slave_count" : 1,  
  "enterprise_project_id" : 0,  
  "restore_point" : {  
    "source_instance_id" : "7033e7c3cf93438797d44ad7ae0a7d95in07",  
    "restore_time" : 1673852043000,  
    "type" : "timestamp"  
  }  
}
```

Example Response

Status code: 201

NOTE

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

Success.

```
{  
  "instance" : {  
    "id" : "5eebbb4c0f9f4a99b42ed1b6334569aain07",  
    "name" : "gaussdb-mysql-instance1",  
  
    "region" : "br-iaas-odin1",  
    "charge_info" : {  
      "charge_mode" : "postPaid"  
    },  
    "datastore" : {  
      "type" : "gaussdb-mysql",  
      "version" : "8.0"  
    },  
    "mode" : "Cluster",  
    "port" : "3306",  
    "enterprise_project_id" : 0,  
    "flavor_ref" : "gaussdb.mysql.xlarge.arm.4",  
    "vpc_id" : "3cedfc54-b105-4652-a4e0-847b11576b58",
```

```
"subnet_id" : "c1cfa53c-65d3-431e-8552-326bf310c7ad",
"security_group_id" : "fc577a1a-f202-424a-977f-24faec3fdd55",
"configuration_id" : "43570e0de32e40c5a15f831aa5ce4176pr07",
"backup_strategy" : {
  "start_time" : "08:00-09:00",
  "keep_days" : 7
},
"availability_zone_mode" : "single"
},
"job_id" : "dff1d289-4d03-4942-8b9f-463ea07c000d"
}
```

Status Code

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

Error Code

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

4.3.2 Querying DB Instances

Function

This API is used to query DB instances according to search criteria. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/instances

Table 4-30 URI parameters

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

Table 4-31 Query parameters

Parameter	Mandatory	Type	Description
id	No	String	Instance ID. The asterisk (*) is reserved for the system. If the instance ID starts with *, it indicates that fuzzy match is performed based on the value following *. Otherwise, the exact match is performed based on the instance ID. The value cannot contain only asterisks (*).
name	No	String	Instance name. The asterisk (*) is reserved for the system. If the instance name starts with *, it indicates that fuzzy match is performed based on the value following *. Otherwise, the exact match is performed based on the instance name. The value cannot contain only asterisks (*).
type	No	String	Instance type to be queried. Currently, only the cluster type is supported.
datastore_type	No	String	DB type. Currently, only gaussdb-mysql is supported.
vpc_id	No	String	VPC ID. <ul style="list-style-type: none">• Method 1: Log in to VPC console and view the VPC ID in the VPC details.• Method 2: See the "Querying VPCs" section in the <i>Virtual Private Cloud API Reference</i>.

Parameter	Mandatory	Type	Description
subnet_id	No	String	Network ID of the subnet. <ul style="list-style-type: none">Method 1: Log in to VPC console and click the target subnet on the Subnets page. You can view the network ID on the displayed page.Method 2: See the "Querying Subnets" section in the <i>Virtual Private Cloud API Reference</i>.
private_ip	No	String	Private IP address.
offset	No	Integer	Index offset. If offset is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number.
limit	No	Integer	Number of records to be queried. The default value is 100 . The value must be a positive integer. The minimum value is 1 and the maximum value is 100 .
tags	No	String	Query based on the instance tag key and value. <ul style="list-style-type: none"><i>{key}</i> indicates the tag key.<i>{value}</i> indicates the tag value. To query instances with multiple tag keys and values, separate key-value pairs with commas (.). The key must be unique. Multiple keys are in AND relationship.

Request Parameters

Table 4-32 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200**Table 4-33** Response body parameters

Parameter	Type	Description
instances	Array of MysqlInstanceListInfo objects	Instance list information.
total_count	Integer	Total number of records.

Table 4-34 MysqlInstanceListInfo

Parameter	Type	Description
id	String	Instance ID.
name	String	Instance name.
status	String	Instance status.
private_ips	Array of strings	Private IP address for write. It is left blank until an ECS is created.

Parameter	Type	Description
public_ips	Array of strings	Public IP addresses.
port	String	Database port.
type	String	DB instance type. The value is Cluster .
region	String	Region where the DB instance is deployed.
datastore	MysqlDatastore object	Database information.
created	String	Creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
updated	String	Update time. The format is the same as that of the created field. NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
db_username	String	Default username.
vpc_id	String	VPC ID.
subnet_id	String	Network ID of the subnet.
security_group_id	String	Security group ID.
flavor_ref	String	Specification code.
flavor_info	MysqlFlavorInfo object	Flavor information.
volume	MysqlVolumeInfo object	Storage disk information.
backup_strategy	MysqlBackupStrategy object	Automated backup policy.
enterprise_project_id	String	Enterprise project ID.
time_zone	String	Time zone.

Parameter	Type	Description
charge_info	MysqlChargeInfo object	Billing mode, which is yearly/monthly or pay-per-use. By default, pay-per-use is used.
dedicated_resource_id	String	Dedicated resource pool ID. This parameter is returned only when the instance belongs to a dedicated resource pool.
tags	Array of InstanceTagItem objects	Tag list.

Table 4-35 MysqlDatastoreWithKernelVersion

Parameter	Type	Description
type	String	DB engine. Currently, only gaussdb-mysql is supported.
version	String	DB version. To obtain details about supported DB engine versions, call the API for querying the DB engine versions .
kernel_version	String	Database kernel version.

Table 4-36 MysqlFlavorInfo

Parameter	Type	Description
vcpus	String	Number of vCPUs.
ram	String	Memory size in GB.

Table 4-37 MysqlVolumeInfo

Parameter	Type	Description
type	String	Disk type.
size	String	Used disk size in GB.

Table 4-38 MysqlBackupStrategy

Parameter	Type	Description
start_time	String	Automated backup start time. The automated backup will be triggered within one hour after the time specified by this parameter. 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. <ol style="list-style-type: none">1. The HH value must be 1 greater than the hh value.2. The values of mm and MM must be the same and must be set to 00.
keep_days	String	Automated backup retention days. Value: 1-732 .

Table 4-39 MysqlChargeInfo

Parameter	Type	Description
charge_mode	String	Billing mode. Valid value: <ul style="list-style-type: none">• prePaid: indicates the yearly/monthly billing mode.• postPaid: indicates the pay-per-use billing mode.
period_type	String	Subscription period. This parameter is available and mandatory only when charge_mode is set to prePaid . Valid value: <ul style="list-style-type: none">• month: The service is subscribed by month.• year: The service is subscribed by year.
period_num	Integer	This parameter is valid and mandatory only when charge_mode is set to prePaid . Valid value: <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 ranges from 1 to 3.

Parameter	Type	Description
is_auto_renew	String	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 during the subscription renewal. <ul style="list-style-type: none">• true: indicates that automatic renewal is enabled.• false: indicates that automatic renewal is disabled. The default value is false.
is_auto_pay	String	Whether the order will be automatically paid after yearly/monthly instances are created. This parameter does not affect the payment method of automatic renewal. <ul style="list-style-type: none">• true: indicates the order will be automatically paid from your account. The default value is true.• false: indicates the order will be manually paid.

Table 4-40 InstanceTagItem

Parameter	Type	Description
key	String	Tag key.
value	String	Tag value.

Status code: 400**Table 4-41** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-42** Response body parameters

Parameter	Type	Description
error_code	String	Error code.

Parameter	Type	Description
error_msg	String	Error message.

Example Request

Querying GaussDB(for MySQL) instances whose private IP addresses are 192.168.0.142

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances?
id=61a4ea66210545909d74a05c27a7179ein07&name=hyAbc&type=Cluster&datastore_type=gaussdb-
mysql&vpc_id=19e5d45d-70fd-4a91-87e9-
b27e71c9891f&subnet_id=bd51fb45-2dcb-4296-8783-8623bfe89bb7&private_ip=192.168.0.142&offset=0&li
mit=10&tags=taurusKey1=value1
```

Example Response

Status code: 200

NOTE

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

Success.

```
{
  "total_count": 1,
  "instances": [ {
    "id": "d738399de028480fabb2b8120d4e01a4in07",
    "name": "gaussdb-mysql-instance01",
    "status": "ACTIVE",
    "port": 3306,
    "type": "Cluster",
    "private_ips": [ "192.168.0.142" ],
    "db_user_name": "root",
    "region": "aaa",
    "datastore": {
      "type": "gaussdb-mysql",
      "version": "8.0",
      "kernel_version": "2.0.29.1"
    },
    "created": "2018-08-20T02:33:49_0800",
    "updated": "2018-08-20T02:33:49_0800",
    "volume": {
      "type": "POOL",
      "size": 100
    },
    "vpc_id": "3cedfc54-b105-4652-a4e0-847b11576b58",
    "subnet_id": "c1cfa53c-65d3-431e-8552-326bf310c7ad",
    "security_group_id": "fc577a1a-f202-424a-977f-24faec3fdd55",
    "flavor_ref": "gaussdb.mysql.xlarge.x86.4",
    "flavor_info": {
      "vcpus": 4,
      "ram": 16
    },
    "backup_strategy": {
      "start_time": "19:00-20:00",
      "keep_days": 7
    },
    "charge_info": {
      "charge_mode": "postPaid"
    },
    "enterprise_project_id": 0,
  }
]
```

```
"time_zone": "UTC",  
"tags": [ ]  
}]  
}
```

Status Code

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

Error Code

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

4.3.3 Rebooting a DB Instance

Function

This API is used to reboot a DB instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-43 URI parameters

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

Request Parameters

Table 4-44 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-45 Request body parameters

Parameter	Mandatory	Type	Description
delay	No	Boolean	Whether the instance will be rebooted with a delay. <ul style="list-style-type: none">• true: The instance will be rebooted during the specified maintenance window.• false (default value): The instance will be rebooted immediately.

Response Parameters

Status code: 200

Table 4-46 Response body parameter

Parameter	Type	Description
job_id	String	Task ID.

Status code: 400**Table 4-47** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-48** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Rebooting a GaussDB(for MySQL) instance in the maintenance window

```
POST https://{endpoint}/v3/056538411200d4cd2f79c003c7606412/instances/  
096c0fc43e804757b59946b80dc27f8bin07/restart  
{  
  "delay" : true  
}
```

Example Response**Status code: 200**

Success.

```
{  
  "job_id" : "e0fbbfc8-1ac4-4721-b9e9-7dd685c5bdd7"  
}
```

Status Code

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

Error Code

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

4.3.4 Deleting a DB Instance

Function

This API is used to delete a DB instance. Currently, DB instances billed in the yearly/monthly mode cannot be deleted. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-49 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	Yes	String	Instance ID, which is compliant with the UUID format.

Request Parameters

Table 4-50 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-51 Response body parameters

Parameter	Type	Description
job_id	String	Task ID.

Status code: 400

Table 4-52 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-53 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

- Deleting a DB instance
DELETE https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/
096c0fc43e804757b59946b80dc27f8bin07

Example Response

Status code: 200

Success.

```
{  
  "job_id" : "04efe8e2-9255-44ae-a98b-d87cae411890"  
}
```

Status Code

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

Error Code

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

4.3.5 Querying Details of a DB Instance

Function

This API is used to query the details of a specified DB instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-54 URI parameters

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

Request Parameters

Table 4-55 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-56 Response body parameters

Parameter	Type	Description
instance	MysqlInstanceInfoDetail object	Instance information.

Table 4-57 MysqlInstanceInfoDetail

Parameter	Type	Description
id	String	Instance ID.
name	String	DB instance name.
project_id	String	Project ID of a tenant in a region.

Parameter	Type	Description
status	String	DB instance status. Value: <ul style="list-style-type: none">● BUILD: The DB instance is being created.● ACTIVE: The DB instance is normal.● FAILED: The DB instance is abnormal.● FROZEN: The DB instance is frozen.● MODIFYING: The DB instance is being scaled up.● REBOOTING: The DB instance is being rebooted.● RESTORING: The DB instance is being restored.● MODIFYING INSTANCE TYPE: The DB instance is changing from primary to standby.● SWITCHOVER: A primary/standby switchover is being performed.● MIGRATING: The DB instance is being migrated.● BACKING UP: The DB instance is being backed up.● MODIFYING DATABASE PORT: The database port is being changed.● STORAGE FULL: The DB instance storage space is full.
port	String	Database port.
alias	String	Instance remarks.
type	String	Instance type. The value is Cluster .
charge_info	MysqlInstanceChargeInfo object	Billing mode, which is yearly/monthly or pay-per-use (default setting).
node_count	Integer	Number of nodes.
datastore	MysqlDatastore object	Database information.
backup_used_space	Double	Used backup space in GB.

Parameter	Type	Description
created	String	Creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
updated	String	Update time. The format is the same as that of the created field. NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
private_write_ips	Array of strings	Private IP address for write.
public_ips	String	Public IP address of the instance.
db_username	String	Default username.
vpc_id	String	VPC ID.
subnet_id	String	Network ID of the subnet.
security_group_id	String	Security group ID.
configuration_id	String	ID of the parameter template used for creating an instance or ID of the latest parameter template that is applied to an instance.
backup_strategy	MysqlBackupStrategy object	Automated backup policy.
nodes	Array of MysqlInstanceNodeInfo objects	Node information.
enterprise_project_id	String	Enterprise project ID.
time_zone	String	Time zone.
az_mode	String	AZ type. Value: <ul style="list-style-type: none">● single: single AZ● multi: multiple AZs

Parameter	Type	Description
master_az_code	String	Primary AZ.
maintenance_window	String	Maintenance window in the UTC format.
tags	Array of MysqlTags objects	Tags for managing instances.
dedicated_resource_id	String	Dedicated resource pool ID. This parameter is returned only when the instance belongs to a dedicated resource pool.
proxies	Array of MysqlProxyInfo objects	Proxy instance information.

Table 4-58 MysqlInstanceChargeInfo

Parameter	Type	Description
charge_mode	String	Billing mode.
order_id	String	Order ID.

Table 4-59 MysqlDatastoreWithKernelVersion

Parameter	Type	Description
type	String	DB engine. Currently, only gaussdb-mysql is supported.
version	String	DB version. For details about supported DB versions, see Querying Version Information About a DB Engine .
kernel_version	String	Database kernel version.

Table 4-60 MysqlBackupStrategy

Parameter	Type	Description
start_time	String	Automated backup start time. The automated backup will be triggered within one hour after the time specified by this parameter. 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. <ol style="list-style-type: none">1. The HH value must be 1 greater than the hh value.2. The values of mm and MM must be the same and must be set to 00.
keep_days	String	Automated backup retention days. Value: 1-732 .

Table 4-61 MysqlInstanceNodeInfo

Parameter	Type	Description
id	String	Instance ID.
name	String	Node name.
type	String	Node type. Value: <ul style="list-style-type: none">• master: primary node• slave: read replica
status	String	Node status.
port	Integer	Database port.
private_read_ips	Array of strings	Private IP address for read of the node.
volume	MysqlInstanceNodeVolumeInfo object	Storage disk information.
az_code	String	AZ.
region_code	String	Region where the instance is located.

Parameter	Type	Description
created	String	Creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
updated	String	Update time. The format is the same as that of the created field. NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
flavor_id	String	Specification ID.
flavor_ref	String	Specification code.
max_connections	String	Maximum number of connections.
vcpus	String	Number of vCPUs.
ram	String	Memory size in GB.
need_restart	Boolean	Whether to reboot the instance for the parameter modifications to take effect.
priority	Integer	Failover priority.

Table 4-62 MysqlInstanceNodeVolumeInfo

Parameter	Type	Description
type	String	Disk type.
used	String	Used disk size in GB.
size	Long	Disk size of the yearly/monthly instance in GB

Table 4-63 MysqlTags

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters. The value cannot be an empty string, a space, or left blank. Only uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_) are allowed.

Parameter	Type	Description
value	String	Tag value. It contains a maximum of 43 Unicode characters. The value can be an empty string. Only uppercase letters, lowercase letters, digits, periods (.), hyphens (-), and underscores (_) are allowed.

Table 4-64 MysqlProxyInfo

Parameter	Type	Description
pool_id	String	Proxy instance ID.
name	String	Proxy instance name.
address	String	Read/Write splitting address of a proxy instance

Status code: 400**Table 4-65** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-66** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying details of a specified DB instance

```
GET https://{endpoint}/v3/97b026aa9cc4417888c14c84a1ad9860/instances/  
436aaafb689c4250a9a5bb33cb271e8cin07
```

Example Response

Status code: 201

NOTE

The values of **region_code** and **az_code** are used as examples.

Success.

```
{
  "instance": {
    "id": "d738399de028480fabb2b8120d4e01a4in07",
    "name": "gaussdb-mysql-instance01",
    "alias": "",
    "status": "ACTIVE",
    "project_id": "3cedfc54-b105-4652-a4e0-847b11576628",
    "enterprise_project_id": 0,
    "type": "Cluster",
    "charge_info": {
      "charge_mode": "postPaid",
      "order_id": ""
    },
    "node_count": 2,
    "datastore": {
      "type": "gaussdb-mysql",
      "version": "8.0",
      "kernel_version": "2.0.29.1"
    },
    "created": "2022-07-14T16:26:58+0800",
    "updated": "2022-07-18T14:20:33+0800",
    "public_ips": [ "10.154.219.187" ],
    "private_write_ips": [ "192.168.0.142" ],

    "db_user_name": "root",
    "port": 3306,
    "vpc_id": "3cedfc54-b105-4652-a4e0-847b11576b58",
    "subnet_id": "c1cfa53c-65d3-431e-8552-326bf310c7ad",
    "security_group_id": "fc577a1a-f202-424a-977f-24faec3fdd55",
    "backup_strategy": {
      "start_time": "19:00-20:00",
      "keep_days": 7
    },
    "nodes": [ {
      "id": "799a0f2fa49a4151bf9f7063c1fbba36no07",
      "name": "gauss-d616-lb07_node01",
      "type": "master",
      "status": "ACTIVE",
      "port": 3306,
      "private_read_ips": [ "192.168.0.163" ],
      "volume": {
        "type": "POOL",
        "used": 0.07
      },
      "az_code": "az1xahz",
      "region_code": "cn-xianhz-1",
      "flavor_id": "3169caaf-6c2f-41d5-aadd-c8fc3d83597e",
      "flavor_ref": "gaussdb.mysql.xlarge.x86.4",
      "max_connections": 1500,
      "vcpus": 4,
      "ram": 16,
      "need_restart": false,
      "priority": 1,
      "created": "2022-07-14T16:26:58+0800",
      "updated": "2022-07-18T09:24:18+0800"
    }, {
      "id": "799a0f2fa49a4151bf9f7063c1fbba35no07",
      "name": "gauss-d616-lb07_node02",
      "type": "slave",
```

```
"status" : "ACTIVE",
"port" : 3306,
"private_read_ips" : [ "192.168.0.162" ],
"volume" : {
  "type" : "POOL",
  "used" : 0.07
},
"az_code" : "az1xahz",
"region_code" : "cn-xianhz-1",
"flavor_id" : "3169caaf-6c2f-41d5-aadd-c8fc3d83597e",
"flavor_ref" : "gaussdb.mysqlxlarge.arm.2.ha",
"max_connections" : 1500,
"vcpus" : 1,
"ram" : 4,
"need_restart" : false,
"priority" : 1,
"created" : "2022-07-14T16:26:58+0800",
"updated" : "2022-07-18T09:36:18+0800"
}],
"time_zone" : "UTC+08:00",
"backup_used_space" : 0.24,
"az_mode" : "single",
"master_az_code" : "az1",
"maintenance_window" : "18:00-22:00",
"tags" : [],
"configuration_id" : "53570e0de54e40c5a15f331aa5sd2176pr07",
"dedicated_resource_id" : "",
"proxies" : [ {
  "pool_id" : "dab1cfc5150c4d1ca0e8c6596bfc0d8cpo01",
  "address" : "192.168.10.76",
  "name" : "proxy-name"
} ]
}
```

Status Code

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

Error Code

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

4.3.6 Querying Details of DB Instances in Batches

Function

This API is used to query details of DB instances in batches. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/instances/details

Table 4-67 URI parameters

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

Table 4-68 Query parameters

Parameter	Mandatory	Type	Description
instance_ids	Yes	String	Instance ID. A maximum of 20 instance IDs can be entered at a time. Separate them with commas (,).

Request Parameters

Table 4-69 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-70 Response body parameters

Parameter	Type	Description
instances	Array of MysqlInstanceInfoDetail objects	Instance details.

Table 4-71 MysqlInstanceInfoDetail

Parameter	Type	Description
id	String	Instance ID.
name	String	Instance name.
project_id	String	Project ID of a tenant in a region.
status	String	Instance status. Value: <ul style="list-style-type: none">● BUILD: The DB instance is being created.● ACTIVE: The DB instance is normal.● FAILED: The instance fails to be created.● FROZEN: The DB instance is frozen.● MODIFYING: The DB instance is being scaled up.● REBOOTING: The DB instance is being rebooted.● RESTORING: The DB instance is being restored.● SWITCHOVER: A primary/standby switchover is being performed.● MIGRATING: The DB instance is being migrated.● BACKING UP: The DB instance is being backed up.● MODIFYING DATABASE PORT: The database port is being changed.● STORAGE FULL: The DB instance storage space is full.
port	String	Database port.
alias	String	Instance remarks.

Parameter	Type	Description
type	String	Instance type. The value is Cluster .
charge_info	MysqlInstanceChargeInfo object	Billing mode, which is yearly/monthly or pay-per-use (default setting).
node_count	Integer	Number of nodes.
datastore	MysqlDatastoreWithKernelVersion object	Database information.
backup_used_space	Double	Used backup space in GB.
created	String	Creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
updated	String	Update time. The format is the same as that of the created field. NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
private_write_ips	Array of strings	Private IP address for write.
public_ips	String	Public IP address of the instance.
db_username	String	Default username.
vpc_id	String	VPC ID.
subnet_id	String	Network ID of the subnet.
security_group_id	String	Security group ID.
configuration_id	String	ID of the parameter template used for creating an instance or ID of the latest parameter template that is applied to an instance.
backup_strategy	MysqlBackupStrategy object	Automated backup policy.
nodes	Array of MysqlInstanceNodeInfo objects	Node information.

Parameter	Type	Description
enterprise_project_id	String	Enterprise project ID.
time_zone	String	Time zone.
az_mode	String	AZ type. Value: <ul style="list-style-type: none">• single: single AZ• multi: multiple AZs
master_az_code	String	Primary AZ.
maintenance_window	String	Maintenance window in the UTC format.
tags	Array of MysqlTags objects	Tags for managing instances.
dedicated_resource_id	String	Dedicated resource pool ID. This parameter is returned only when the instance belongs to a dedicated resource pool.
proxies	Array of MysqlProxyInfo objects	Proxy instance information.

Table 4-72 MysqlInstanceChargeInfo

Parameter	Type	Description
charge_mode	String	Billing mode.
order_id	String	Order ID.

Table 4-73 MysqlDatastoreWithKernelVersion

Parameter	Type	Description
type	String	DB engine. Currently, only gaussdb-mysql is supported.
version	String	DB version. For details about supported DB versions, see Querying Version Information About a DB Engine .
kernel_version	String	Database kernel version.

Table 4-74 MysqlBackupStrategy

Parameter	Type	Description
start_time	String	Automated backup start time. The automated backup will be triggered within one hour after the time specified by this parameter. 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. <ol style="list-style-type: none">1. The HH value must be 1 greater than the hh value.2. The values of mm and MM must be the same and must be set to 00.
keep_days	String	Automated backup retention days. Value: 1-732 .

Table 4-75 MysqlInstanceNodeInfo

Parameter	Type	Description
id	String	Instance ID.
name	String	Node name.
type	String	Node type. Value: <ul style="list-style-type: none">• master: primary node• slave: read replica
status	String	Node status.
port	Integer	Database port.
private_read_ips	Array of strings	Private IP address for read of the node.
volume	MysqlInstanceNodeVolumeInfo object	Storage disk information.
az_code	String	AZ.
region_code	String	Region where the instance is located.

Parameter	Type	Description
created	String	Creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
updated	String	Update time. The format is the same as that of the created field. NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
flavor_id	String	Specification ID.
flavor_ref	String	Specification code.
max_connections	String	Maximum number of connections.
vcpus	String	Number of vCPUs.
ram	String	Memory size in GB.
need_restart	Boolean	Whether to reboot the instance for the parameter modifications to take effect.
priority	Integer	Failover priority.

Table 4-76 MysqlInstanceNodeVolumeInfo

Parameter	Type	Description
type	String	Disk type.
used	String	Used disk size in GB.
size	Long	Disk size of the yearly/monthly instance in GB

Table 4-77 MysqlTags

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters. The value cannot be an empty string, a space, or left blank. Only uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_) are allowed.
value	String	Tag value. It contains a maximum of 43 Unicode characters. The value can be an empty string. Only uppercase letters, lowercase letters, digits, periods (.), hyphens (-), and underscores (_) are allowed.

Table 4-78 MysqlProxyInfo

Parameter	Type	Description
pool_id	String	Proxy instance ID.
name	String	Proxy instance name.
address	String	Read/Write splitting address of a proxy instance

Status code: 400**Table 4-79** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-80** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying details of DB instances in batches

```
GET https://{endpoint}/v3/97b026aa9cc4417888c14c84a1ad9860/instances/details?  
instance_ids=436aaafb689c4250a9a5bb33cb271e8cin07,d738399de028480fabb2b8120d4e01a4in07
```

Example Response

Status code: 200

Success.

```
{  
  "instances": [ {  
    "id": "d738399de028480fabb2b8120d4e01a4in07",  
    "name": "gaussdb-mysql-instance01",  
    "alias": "",  
    "status": "ACTIVE",  
    "project_id": "3cedfc54-b105-4652-a4e0-847b11576628",  
    "enterprise_project_id": 0,  
    "type": "Cluster",  
    "charge_info": {  
      "charge_mode": "postPaid",  
      "order_id": ""  
    },  
    "node_count": 2,  
    "datastore": {  
      "type": "gaussdb-mysql",  
      "version": "8.0",  
      "kernel_version": "2.0.29.1"  
    },  
    "created": "2022-07-14T16:26:58+0800",  
    "updated": "2022-07-18T14:20:33+0800",  
    "public_ips": [ "10.154.219.187" ],  
    "private_write_ips": [ "192.168.0.142" ],  
  
    "db_user_name": "root",  
    "port": 3306,  
    "vpc_id": "3cedfc54-b105-4652-a4e0-847b11576628",  
    "subnet_id": "c1cfa53c-65d3-431e-8552-326bf310c7ad",  
    "security_group_id": "fc577a1a-f202-424a-977f-24faec3fdd55",  
    "backup_strategy": {  
      "start_time": "19:00-20:00",  
      "keep_days": 7  
    },  
    "nodes": [ {  
      "id": "799a0f2fa49a4151bf9f7063c1fbba36no07",  
      "name": "gauss-d616-lb07_node01",  
      "type": "master",  
      "status": "ACTIVE",  
      "port": 3306,  
      "private_read_ips": [ "192.168.0.163" ],  
      "volume": {  
        "type": "POOL",  
        "used": 0.07  
      },  
      "az_code": "az1xahz",  
      "region_code": "cn-xianhz-1",  
      "flavor_id": "3169caaf-6c2f-41d5-aadd-c8fc3d83597e",  
      "flavor_ref": "gaussdb.mysql.xlarge.x86.4",  
      "max_connections": 1500,  
      "vcpus": 4,  
      "ram": 16,  
      "need_restart": false,  
      "priority": 1,  
      "created": "2022-07-14T16:26:58+0800",  
      "updated": "2022-07-18T09:24:18+0800"  
    }  
  ]  
}
```

```
}, {
  "id": "799a0f2fa49a4151bf9f7063c1fbba35no07",
  "name": "gauss-d616-lb07_node02",
  "type": "slave",
  "status": "ACTIVE",
  "port": 3306,
  "private_read_ips": [ "192.168.0.162" ],
  "volume": {
    "type": "POOL",
    "used": 0.07
  },
  "az_code": "az1xahz",
  "region_code": "cn-xianhz-1",
  "flavor_id": "3169caaf-6c2f-41d5-aadd-c8fc3d83597e",
  "flavor_ref": "gaussdb.mysql.xlarge.x86.4",
  "max_connections": 1500,
  "vcpus": 4,
  "ram": 16,
  "need_restart": false,
  "priority": 1,
  "created": "2022-07-14T16:26:58+0800",
  "updated": "2022-07-18T09:36:18+0800"
}],
"time_zone": "UTC+08:00",
"backup_used_space": 0.24,
"az_mode": "single",
"master_az_code": "az1",
"maintenance_window": "18:00-22:00",
"tags": [ ],
"configuration_id": "53570e0de54e40c5a15f331aa5sd2176pr07",
"dedicated_resource_id": "",
"proxies": [ {
  "pool_id": "dab1cfc5150c4d1ca0e8c6596bfc0d8cpo01",
  "address": "192.168.10.76",
  "name": "proxy-name"
} ]
} ]
}
```

Status Code

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

Error Code

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

4.3.7 Creating a Read Replica

Function

This API is used to create a read replica. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

POST /v3/{project_id}/instances/{instance_id}/nodes/enlarge

Table 4-81 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	Yes	String	Instance ID, which is compliant with the UUID format.

Request Parameters

Table 4-82 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-83 Request body parameters

Parameter	Mandatory	Type	Description
priorities	Yes	Array of integers	Failover priority of a read replica. Failover priority ranges from 1 for the first priority to 16 for the last priority. This priority determines the order in which read replicas are promoted when recovering from a primary node failure. Read replicas with the same priority have a same probability of being promoted to the new primary node.
is_auto_pay	No	String	Whether the order will be automatically paid after yearly/monthly instances are created. This parameter does not affect the payment method of automatic renewal. <ul style="list-style-type: none">• true: indicates the order will be automatically paid from your account. The default value is true.• false: indicates the order will be manually paid.

Response Parameters

Status code: 201

Table 4-84 Response body parameters

Parameter	Type	Description
instance_id	String	Instance ID.
node_names	Array of strings	Node name list
job_id	String	ID of the task for creating a read replica. This parameter is returned only when a pay-per-use read replica is created.
order_id	String	Order ID. This parameter is returned when yearly/monthly read replicas are created.

Status code: 400

Table 4-85 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-86 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Creating a read replica for a DB instance

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/
ba62a0b83a1b42bfab275829d86ac0fdin07/nodes/enlarge
{
  "priorities" : [ 1, 2 ]
}
```

Example Response

Status code: 201

Success.

```
{
  "instance_id" : "ba62a0b83a1b42bfab275829d86ac0fdin07",
  "node_names" : [ "gauss-ccf5_node03" ],
  "job_id" : "dff1d289-4d03-4942-8b9f-463ea07c000d"
}
```

Status Code

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

Error Code

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

4.3.8 Deleting a Read Replica

Function

This API is used to delete a read replica. For multi-AZ deployment, the primary node and remaining read replicas must be located in different AZs after read replicas are deleted. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

```
DELETE /v3/{project_id}/instances/{instance_id}/nodes/{node_id}
```

Table 4-87 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	Yes	String	Instance ID, which is compliant with the UUID format.
node_id	Yes	String	Node ID, which is compliant with the UUID format.

Request Parameters

Table 4-88 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">en-uszh-cn

Response Parameters

Status code: 200

Table 4-89 Response body parameters

Parameter	Type	Description
job_id	String	Task ID.

Status code: 400

Table 4-90 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-91 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

- Deleting a read replica of a DB instance
DELETE https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/
3d39c18788b54a919bab633874c159dfin01/nodes/096c0fc43e804757b59946b80dc27f8bin07

Example Response

Status code: 200

Success.

```
{  
  "job_id" : "04efe8e2-9255-44ae-a98b-d87cae411890"  
}
```

Status Code

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

Error Code

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

4.3.9 Scaling up Storage of a Yearly/Monthly DB Instance

Function

This API is used to scale up storage of a yearly/monthly DB instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

POST /v3/{project_id}/instances/{instance_id}/volume/extend

Table 4-92 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	Yes	String	Instance ID, which is compliant with the UUID format.

Request Parameters

Table 4-93 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-94 Request body parameters

Parameter	Mandatory	Type	Description
size	Yes	Integer	Storage space after scaling. The initial minimum storage of a yearly/monthly instance is 40 GB. The new storage must be a multiple of 10 and greater than the used storage. The maximum storage is 128,000 GB. Value: <ul style="list-style-type: none">• The storage must be at least 50 GB during scale-up.• The storage must be at least 40 GB during scale-down.

Parameter	Mandatory	Type	Description
is_auto_pay	No	String	Whether the order will be automatically paid. <ul style="list-style-type: none"> • true: indicates the order will be automatically paid from your account. The default value is true. • false: indicates the order will be manually paid.

Response Parameters

Status code: 201

Table 4-95 Response body parameters

Parameter	Type	Description
size	Integer	New storage in GB.
order_id	String	Order ID.

Status code: 400

Table 4-96 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-97 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Scaling up the storage of a yearly/monthly DB instance to 50 GB

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/
ba62a0b83a1b42bfab275829d86ac0fdin07/volume/extend
{
  "size" : 50
}
```

Example Response

Status code: 201

Success.

```
{
  "size" : 50,
  "order_id" : "CS2001221129LVGUU"
}
```

Status Code

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

Error Code

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

4.3.10 Changing a DB Instance Name

Function

This API is used to change a DB instance name. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-98 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	Yes	String	Instance ID, which is compliant with the UUID format.

Request Parameters

Table 4-99 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-100 Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Instance name. Instances of the same type can have same names under the same tenant. The name consists of 4 to 64 characters and starts with a letter. It is case-sensitive and can contain only letters, digits, hyphens (-), and underscores (_).

Response Parameters

Status code: 200

Table 4-101 Response body parameters

Parameter	Type	Description
job_id	String	Task ID for changing a DB instance name.

Status code: 400

Table 4-102 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-103** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Changing the instance name to **gaussdb-name**

```
PUT https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/
ba62a0b83a1b42bfab275829d86ac0fdin07/name
{
  "name" : "gaussdb-name"
}
```

Example Response

Status code: 200

Success.

```
{
  "job_id" : "0f6b6a9e-bd39-4e95-9374-e4d134e5a3d1"
}
```

Status Code

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

Error Code

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

4.3.11 Resetting a Database Password

Function

This API is used to reset a database password. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-104 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	Yes	String	Instance ID, which is compliant with the UUID format.

Request Parameters

Table 4-105 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-106 Request body parameters

Parameter	Mandatory	Type	Description
password	Yes	String	Database password. Value: The password consists of 8 to 32 characters and contains at least three types of the following: uppercase letters, lowercase letters, digits, and special characters (~!@#\$\$%^*_-=+?,()&). NOTE You are advised to enter a strong password to improve security and prevent security risks such as brute force cracking. If you enter a weak password, the system automatically determines that the password is invalid.

Response Parameters

Status code: 400

Table 4-107 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-108 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Resetting a database password

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/
```

```
ba62a0b83a1b42bfab275829d86ac0fdin07/password
{
  "password" : "Test_345612"
}
```

Example Response

None

Status Code

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

Error Code

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

4.3.12 Changing DB Instance Specifications

Function

This API is used to change DB instance specifications. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-109 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	Yes	String	Instance ID, which is compliant with the UUID format.

Request Parameters

Table 4-110 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-111 Request body parameters

Parameter	Mandatory	Type	Description
resize_flavor	Yes	MySQLResizeFlavor object	Specification change information.
is_auto_pay	No	String	Whether the order will be automatically paid when the specifications of yearly/ monthly instances are changed. <ul style="list-style-type: none">• true: indicates the order will be automatically paid from your account. The default value is true.• false: indicates the order will be manually paid.

Table 4-112 MySQLResizeFlavor

Parameter	Mandatory	Type	Description
spec_code	Yes	String	Specification code.

Response Parameters

Status code: 200

Table 4-113 Response body parameters

Parameter	Type	Description
job_id	String	Job ID for changing DB instance specifications. This parameter is returned only when you change the specifications of a pay-per-use DB instance.
order_id	String	Order ID. This parameter is returned only when DB instances are billed at a yearly/monthly basis.

Status code: 400

Table 4-114 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-115 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Changing the specifications of a DB instance to 4 vCPUs and 32 GB memory

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/  
ba62a0b83a1b42bfab275829d86ac0fdin07/action  
{  
  "resize_flavor" : {  
    "spec_code" : "gaussdb.mysql.xlarge.arm.8"  
  }  
}
```

Example Response

Status code: 200

Success.

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

Status Code

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

Error Code

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

4.3.13 Querying Dedicated Resource Pools

Function

This API is used to obtain information about all dedicated resource pools you created. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/dedicated-resources

Table 4-116 URI parameters

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

Table 4-117 Query parameters

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

Request Parameters

Table 4-118 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-119 Response body parameters

Parameter	Type	Description
resources	Array of DedicatedResource objects	Dedicated resource pool information.
total_count	Integer	Number of dedicated resource pools.

Table 4-120 DedicatedResource

Parameter	Type	Description
id	String	ID of the dedicated resource pool.
resource_name	String	Name of the dedicated resource pool.
engine_name	String	DB engine.
architecture	String	CPU architecture.
status	String	Status of the dedicated resource pool. Value: <ul style="list-style-type: none">• NORMAL• BUILDING• EXTENDING• DELETED
capacity	DedicatedResourceCapacity object	Capacity of the dedicated resource pool.
availability_zone	Array of strings	AZ where the dedicated resource pool is deployed.

Table 4-121 DedicatedResourceCapacity

Parameter	Type	Description
ram	Integer	Memory size in GB.
volume	Long	Disk capacity in GB.
vcpus	Integer	Number of vCPUs.

Status code: 400

Table 4-122 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-123** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying dedicated resource pools

GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/dedicated-resources

Example Response

Status code: 200

Success.

```
{
  "resources": [ {
    "id": "1d07f7ba-f140-46a7-b002-58ba22ee6ff3",
    "resource_name": "testdcc",
    "engine_name": "gaussdb-mysql",
    "architecture": "ARM",
    "status": "NORMAL",
    "capacity": {
      "ram": 256,
      "volume": 10000000,
      "vcpus": 64
    },
    "availability_zone": [ "az1xahz" ]
  } ]
}
```

Status Code

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

Error Code

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

4.3.14 Querying Dedicated Resources

Function

This API is used to query dedicated resources. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/dedicated-resource/{dedicated_resource_id}

Table 4-124 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
dedicated_resource_id	Yes	String	ID of the dedicated resource pool.

Request Parameters

Table 4-125 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-126 Response body parameters

Parameter	Type	Description
id	String	ID of the dedicated resource pool.
name	String	Name of the dedicated resource pool.
engine_name	String	Database name.
availability_zone_ids	Array of strings	AZ.
architecture	String	CPU architecture.
status	String	Status of the dedicated resource pool.
dedicated_compute_info	DedicatedComputeInfo object	Compute resource information.
dedicated_storage_info	DedicatedStorageInfo object	Storage resource information.

Table 4-127 DedicatedComputeInfo

Parameter	Type	Description
vcpus_total	Integer	Total vCPUs in the dedicated resource pool.
vcpus_used	Integer	Used vCPUs in the dedicated resource pool.
ram_total	Integer	Total memory size of the dedicated resource pool, in GB.
ram_used	Integer	Used memory size of the dedicated resource pool, in GB.
spec_code	String	Compute resource specification code of the dedicated resource pool.
host_num	Integer	Number of compute hosts in the dedicated resource pool.

Table 4-128 DedicatedStorageInfo

Parameter	Type	Description
spec_code	String	Storage resource specification code of the dedicated resource pool.
host_num	Integer	Number of storage hosts in the dedicated resource pool.

Status code: 400**Table 4-129** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-130** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying dedicated resources

```
GET https://{endpoint}/v3/058497e1c100d3eb2f3cc01160616934/dedicated-resource/6e097c33-d6b9-4ca5-83cb-6cc79dcf4f06
```

Example Response

Status code: 200

Success.

```
{
  "id" : "e097c33-d6b9-4ca5-83cb-6cc79dcf4f06",
  "name" : "test_dcc",
  "engine_name" : "taurus",
  "availability_zone_ids" : [ "az1xahz", "az2xahz" ],
  "architecture" : "ARM",
  "status" : "normal",
  "dedicated_compute_info" : {
    "vcpu_total" : 128,
    "vcpu_used" : 64,
```

```
"ram_total" : 512,  
"ram_used" : 256,  
"spec_code" : "gaussdb.mysql.c6.host",  
"host_num" : 1  
},  
"dedicated_storage_info" : {  
"spec_code" : "gaussdb.mysql.dfvpool.30tb.host",  
"host_num" : 1  
}  
}
```

Status Code

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

Error Code

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

4.3.15 Configuring the Monitoring By Seconds Function

Function

This API is used to configure the Monitoring By Seconds function for instances. You can set the monitoring interval to 1 second or 5 seconds to view the metric values. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

PUT /v3/{project_id}/instances/{instance_id}/monitor-policy

Table 4-131 URI parameters

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

Request Parameters

Table 4-132 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-133 Request body parameters

Parameter	Mandatory	Type	Description
monitor_switch	Yes	Boolean	Whether to enable Monitoring by Seconds. <ul style="list-style-type: none">• true: enabled• false: disabled
period	No	Integer	Collection period. <ul style="list-style-type: none">• This parameter is valid only when monitor_switch is set to true. The default value is 5s. Value:<ul style="list-style-type: none">- 1: The collection period is 1s.- 5: The collection period is 5s.• This parameter is not specified when monitor_switch is set to false.

Response Parameters

Status code: 200

Table 4-134 Response body parameters

Parameter	Type	Description
job_id	String	Taskflow ID for modifying Monitoring by Seconds

Status code: 400

Table 4-135 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-136 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Enabling Monitoring by Seconds and changing its collection period to 1s

```
PUT https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/  
61a4ea66210545909d74a05c27a7179ein07/monitor-policy  
{  
  "monitor_switch" : true,  
  "period" : 1  
}
```

Example Response

Status code: 200

Success.

```
{  
  "job_id" : "6b7dd5d4-4590-4f14-b164-a8737ce071d5"  
}
```


Status Code

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

Error Code

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

4.3.16 Querying the Configuration of Monitoring by Seconds

Function

This API is used to query the configuration of Monitoring by Seconds. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/instances/{instance_id}/monitor-policy

Table 4-137 URI parameters

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

Request Parameters

Table 4-138 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-139 Response body parameters

Parameter	Type	Description
monitor_switch	Boolean	Whether to enable Monitoring by Seconds. <ul style="list-style-type: none">• true: enabled• false: disabled
period	Integer	Collection period. This parameter is returned only when monitor_switch is set to true . <ul style="list-style-type: none">• 1: The collection period is 1s.• 5: The collection period is 5s.

Status code: 400

Table 4-140 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-141 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying the status of Monitoring by Seconds for a DB instance

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/  
61a4ea66210545909d74a05c27a7179ein07/monitor-policy
```

Example Response

Status code: 200

Success.

```
{  
  "monitor_switch" : true,  
  "period" : "1"  
}
```

Status Code

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

Error Code

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

4.3.17 Enabling or Disabling SSL

Function

This API is used to enable or disable SSL. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

PUT /v3/{project_id}/instances/{instance_id}/ssl-option

Table 4-142 URI parameters

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

Request Parameters

Table 4-143 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-144 Request body parameter

Parameter	Mandatory	Type	Description
ssl_option	Yes	Boolean	Whether to enable SSL. <ul style="list-style-type: none">• true: SSL is enabled.• false: SSL is disabled.

Response Parameters

Status code: 200

Table 4-145 Response body parameter

Parameter	Type	Description
job_id	String	Task ID.

Status code: 400

Table 4-146 Response body parameter

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-147** Response body parameter

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Enabling SSL for a DB instance

```
PUT https://{endpoint}/v3/056538411200d4cd2f79c003c7606412/instances/096c0fc43e804757b59946b80dc27f8bin07/ssl-option
{
  "ssl_option" : true
}
```

Example Response

Status code: 200

Success.

```
{
  "job_id" : "e0fbbfc8-1ac4-4721-b9e9-7dd685c5bdd7"
}
```

Status Code

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

Error Code

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

4.3.18 Binding an EIP

Function

This API is used to bind an EIP to a DB instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

PUT /v3/{project_id}/instances/{instance_id}/public-ips/bind

Table 4-148 URI parameters

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

Request Parameters

Table 4-149 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-150 Request body parameters

Parameter	Mandatory	Type	Description
public_ip	Yes	String	EIP to be bound.
public_ip_id	Yes	String	EIP ID.

Response Parameters

Status code: 200

Table 4-151 Response body parameter

Parameter	Type	Description
job_id	String	Task ID.

Status code: 400

Table 4-152 Response body parameter

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-153 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Binding an EIP to a DB instance

```
PUT https://{endpoint}/v3/056538411200d4cd2f79c003c7606412/instances/  
096c0fc43e804757b59946b80dc27f8bin07/public-ips/bind  
{  
  "public_ip" : "10.145.51.214",  
  "public_ip_id" : "8403e9cd-a7fa-4288-8b15-c7ceac1etest"  
}
```

Example Response

Status code: 200

Success.

```
{  
  "job_id" : "e0fbffc8-1ac4-4721-b9e9-7dd685c5bdd7"  
}
```

Status Code

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

Error Code

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

4.3.19 Unbinding an EIP

Function

This API is used to unbind an EIP from a DB Instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

PUT /v3/{project_id}/instances/{instance_id}/public-ips/unbind

Table 4-154 URI parameters

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

Request Parameters

Table 4-155 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-156 Response body parameter

Parameter	Type	Description
job_id	String	Task ID.

Status code: 400

Table 4-157 Response body parameter

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-158 Response body parameter

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Unbinding an EIP from a DB instance

```
PUT https://{endpoint}/v3/056538411200d4cd2f79c003c7606412/instances/  
096c0fc43e804757b59946b80dc27f8bin07/public-ips/unbind
```

Example Response

Status code: 200

Success.

```
{  
  "job_id" : "e0fbbfc8-1ac4-4721-b9e9-7dd685c5bdd7"  
}
```

Status Code

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

Error Code

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

4.3.20 Promoting a Read Replica to Primary

Function

This API is used to promote a read replica to the primary node. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

```
PUT /v3/{project_id}/instances/{instance_id}/switchover
```

Table 4-159 URI parameters

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

Request Parameters

Table 4-160 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-161 Request body parameters

Parameter	Mandatory	Type	Description
node_id	Yes	String	ID of the read replica that will be promoted to the primary.

Response Parameters

Status code: 200

Table 4-162 Response body parameter

Parameter	Type	Description
job_id	String	Task ID.

Status code: 400

Table 4-163 Response body parameter

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-164 Response body parameter

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Promoting a read replica to primary

```
PUT https://{endpoint}/v3/056538411200d4cd2f79c003c7606412/instances/  
096c0fc43e804757b59946b80dc27f8bin07/switchover  
{  
  "node_id" : "1801a615b52b4a5697cfe385f6affbf4no07"  
}
```

Example Response

Status code: 200

Success.

```
{  
  "job_id" : "e0fbbfc8-1ac4-4721-b9e9-7dd685c5bdd7"  
}
```

Status Code

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

Error Code

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

4.3.21 Changing a Maintenance Window

Function

This API is used to change a maintenance window. To prevent service interruption, set the maintenance window to off-peak hours. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

PUT /v3/{project_id}/instances/{instance_id}/ops-window

Table 4-165 URI parameters

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

Request Parameters

Table 4-166 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-167 Request body parameters

Parameter	Mandatory	Type	Description
start_time	Yes	String	Start time for a maintenance window (UTC time).
end_time	Yes	String	End time for a maintenance window (UTC time). NOTE The start time and end time of a maintenance window must be on the hour, and the interval between them must be four hours.

Response Parameters

Status code: 400

Table 4-168 Response body parameter

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-169 Response body parameter

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

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

```
PUT https://{endpoint}/v3/056538411200d4cd2f79c003c7606412/instances/  
096c0fc43e804757b59946b80dc27f8bin07/ops-window  
{  
  "start_time": "22:00",  
  "end_time": "02:00"  
}
```

Example Response

Status code: 200

Success.

```
{}
```

Status Code

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

Error Code

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

4.3.22 Modifying a Security Group

Function

This API is used to modify the security group of a specified DB instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-170 URI parameters

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

Request Parameters

Table 4-171 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-172 Request body parameter

Parameter	Mandatory	Type	Description
security_group_id	Yes	String	Security group ID.

Response Parameters

Status code: 200

Table 4-173 Response body parameters

Parameter	Type	Description
job_id	String	Task ID.

Status code: 400

Table 4-174 Response body parameters

Parameter	Type	Description
error_code	String	Error code.

Parameter	Type	Description
error_msg	String	Error message.

Status code: 500

Table 4-175 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Changing the security group of a DB instance

```
PUT https://{endpoint}/v3/056538411200d4cd2f79c003c7606412/instances/096c0fc43e804757b59946b80dc27f8bin07/security-group
{
  "security_group_id" : "054f55b5-946e-4761-a1e3-3be6892827c1"
}
```

Example Response

Status code: 200

Success.

```
{
  "job_id" : "e0fbbfc8-1ac4-4721-b9e9-7dd685c5bdd7"
}
```

Status Code

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

Error Code

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

4.3.23 Changing a Private IP Address

Function

This API is used to change the private IP address of a DB instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

PUT /v3/{project_id}/instances/{instance_id}/internal-ip

Table 4-176 URI parameters

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

Request Parameters

Table 4-177 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">en-uszh-cn

Table 4-178 Request body parameters

Parameter	Mandatory	Type	Description
internal_ip	Yes	String	Private IP address.

Response Parameters

Status code: 200

Table 4-179 Response body parameters

Parameter	Type	Description
job_id	String	Task ID.

Status code: 400**Table 4-180** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-181** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Changing the private IP address of a DB instance

```
PUT https://{endpoint}/v3/056538411200d4cd2f79c003c7606412/instances/  
096c0fc43e804757b59946b80dc27f8bin07/internal-ip  
{  
  "internal_ip" : "192.168.0.213"  
}
```

Example Response

Status code: 200

Success.

```
{  
  "job_id" : "e0fbbfc8-1ac4-4721-b9e9-7dd685c5bdd7"  
}
```

Status Code

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

Error Code

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

4.3.24 Changing a Database Port

Function

This API is used to change the database port of a DB instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-182 URI parameters

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

Request Parameters

Table 4-183 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-184 Request body parameter

Parameter	Mandatory	Type	Description
port	Yes	Integer	Port number. Value range: 1024 to 65535, excluding 5342 to 5345, 12017, 20000, 20201, 20202, 33062, and 33071.

Response Parameters

Status code: 200

Table 4-185 Response body parameters

Parameter	Type	Description
job_id	String	Task ID.

Status code: 400

Table 4-186 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-187 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Changing the database port to 8836

```
PUT https://{endpoint}/v3/056538411200d4cd2f79c003c7606412/instances/  
096c0fc43e804757b59946b80dc27f8bin07/port  
{  
  "port" : 8836  
}
```

Example Response

Status code: 200

Success.

```
{  
  "job_id" : "e0fbbfc8-1ac4-4721-b9e9-7dd685c5bdd7"  
}
```

Status Code

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

Error Code

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

4.3.25 Changing a DB Instance Description

Function

This API is used to change a DB instance description. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-188 URI parameters

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

Request Parameters

Table 4-189 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-190 Request body parameter

Parameter	Mandatory	Type	Description
alias	Yes	String	Instance description. The value can contain 0 to 64 characters, including letters, digits, periods (.), underscores (_), and hyphens (-).

Response Parameters

Status code: 400

Table 4-191 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-192** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Changing the description of a DB instance to **Test_alias**

```
PUT https://{endpoint}/v3/056538411200d4cd2f79c003c7606412/instances/  
096c0fc43e804757b59946b80dc27f8bin07/alias  
{  
  "alias" : "Test_alias"  
}
```

Example Response

Status code: 200

Success.

```
{}
```

Status Code

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

Error Code

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

4.4 Backup Management

4.4.1 Modifying an Automated Backup Policy

Function

This API is used to modify an automated backup policy. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-193 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	Yes	String	Instance ID, which is compliant with the UUID format.

Request Parameters

Table 4-194 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-195 Request body parameters

Parameter	Mandatory	Type	Description
backup_policy	Yes	MysqlBackup Policy object	Database information.

Table 4-196 MysqlBackupPolicy

Parameter	Mandatory	Type	Description
start_time	Yes	String	Backup time window. Automated backups will be triggered during the backup time window. The value cannot be empty. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format. <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 00. Example value: 21:00-22:00
keep_days	Yes	Integer	Backup retention days. Value: 1 to 732
period	Yes	String	Backup cycle configuration. Data will be automatically backed up on the selected days every week. Value range: The value is a number separated by commas (,), indicating the days of the week. For example, the value 1,2,3,4 indicates that the backup period is Monday, Tuesday, Wednesday, and Thursday.

Parameter	Mandatory	Type	Description
retention_number_backup_level1	No	Integer	Number of retained level-1 backups. The default value is 0 . <ul style="list-style-type: none">This parameter is mandatory when the level-1 backup function is enabled. Value:<ul style="list-style-type: none">01This parameter is unavailable when the level-1 backup function is disabled.

Response Parameters

Status code: 200

Table 4-197 Response body parameters

Parameter	Type	Description
status	String	Status. Value: <ul style="list-style-type: none">BUILDING: Modification in progressCOMPLETED: Modification completedFAILED: Modification failed
instance_id	String	Instance ID.
instance_name	String	Instance name.

Status code: 400

Table 4-198 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-199 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Modifying the automated backup policy of the DB instance (Data is backed up from 19:00 to 20:00 every Monday to Friday. Backup files are stored for seven days.)

```
PUT https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/
ba62a0b83a1b42bfab275829d86ac0fdin07/backups/policy/update
{
  "backup_policy": {
    "keep_days": 7,
    "start_time": "19:00-20:00",
    "period": "1,2,3,4,5"
  }
}
```

Example Response

Status code: 200

Success.

```
{
  "status": "COMPLETED",
  "instance_id": "ba62a0b83a1b42bfab275829d86ac0fdin07",
  "instance_name": "gauss-mysql"
}
```

Status Code

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

Error Code

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

4.4.2 Creating a Manual Backup

Function

This API is used to create a manual backup. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

POST /v3/{project_id}/backups/create

Table 4-200 URI parameters

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

Request Parameters

Table 4-201 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-202 Request body parameters

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Instance ID, which is compliant with the UUID format.

Parameter	Mandatory	Type	Description
name	Yes	String	Backup name. Value: The name can contain 4 to 64 characters and must start with a letter. Only letters (case-sensitive), digits, hyphens (-), and underscores (_) are allowed.
description	No	String	Backup description. Value: It contains a maximum of 256 characters and cannot contain the special characters (>! <"&'=).

Response Parameters

Status code: 201

Table 4-203 Response body parameters

Parameter	Type	Description
backup	backup object	Backup information.
job_id	String	Task ID.

Table 4-204 backup

Parameter	Type	Description
id	String	Backup ID.
name	String	Backup name.
description	String	Backup description.
begin_time	String	Backup start time in the "yyyy-mm-ddThh:mm:ssZ" format, where "T" indicates the start time of the time field, and "Z" indicates the time zone offset.
status	String	Backup status. Value: BUILDING : Backup in progress

Parameter	Type	Description
type	String	Backup type. Value: manual : manual full backup
instance_id	String	Instance ID.

Status code: 400

Table 4-205 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-206 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Creating a manual backup

```
POST https://{endpoint}/v3/619d3e78f61b4be68bc5aa0b59edcf7b/backups/create
{
  "instance_id" : "07033b125fd94a8a96896f8bcfee6ddain07",
  "name" : "backup-1",
  "description": "Manual backup"
}
```

Example Response

Status code: 201

Success.

```
{
  "backup" : {
    "id" : "2f4ddb93-b901-4b08-93d8-1d2e472f30fe",
    "name" : "backup-1",
    "description": "Manual backup"
    "begin_time" : "2020-07-07T01:17:05+0800",
```

```
"status" : "BUILDING",
"type" : "manual",
"instance_id" : "07033b125fd94a8a96896f8bcfee6ddain07"
},
"job_id" : "e0fbbfc8-1ac4-4721-b9e9-7dd685c5bdd7"
}
```

Status Code

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

Error Code

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

4.4.3 Querying Backups

Function

This API is used to query backups according to search criteria. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/backups

Table 4-207 URI parameters

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

Table 4-208 Query parameters

Parameter	Mandatory	Type	Description
instance_id	No	String	Instance ID.
backup_id	No	String	Backup ID. To obtain the value, see the response parameter backup returned in Creating a Manual Backup .

Parameter	Mandatory	Type	Description
backup_type	No	String	Backup type. Value: <ul style="list-style-type: none">• auto: automated full backup• manual: manual full backup
offset	No	String	Index offset. If offset is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number.
limit	No	String	Number of records to be queried. The default value is 100 . The value must be a positive integer. The minimum value is 1 and the maximum value is 100 .
begin_time	No	String	Query start time. The format is "yyyy-mm-ddThh:mm:ssZ". T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
end_time	No	String	Query end time. The format is "yyyy-mm-ddThh:mm:ssZ" and the end time must be later than the start time. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.

Request Parameters

Table 4-209 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-210 Response body parameters

Parameter	Type	Description
backups	Array of backups objects	Backup information.
total_count	Long	Total number of backup files.

Table 4-211 backups

Parameter	Type	Description
id	String	Backup ID.
name	String	Backup name.
begin_time	String	Backup start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.

Parameter	Type	Description
end_time	String	Backup end time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
status	String	Backup status. Value: <ul style="list-style-type: none"> ● BUILDING: Backup in progress ● COMPLETED: Backup completed ● FAILED: Backup failed ● AVAILABLE: Backup available
take_up_time	Integer	Backup duration in minutes.
type	String	Backup type. Value: <ul style="list-style-type: none"> ● auto: automated full backup ● manual: manual full backup
size	Long	Backup size in MB.
datastore	MysqlDatastore object	Database information.
instance_id	String	Instance ID.
backup_level	String	Backup level. This parameter is returned when the level-1 backup function is enabled. Value: <ul style="list-style-type: none"> ● 0: Backup being created or creation failed ● 1: level-1 backup ● 2: level-2 backup
description	String	Description of the backup file.

Table 4-212 MysqlDatastore

Parameter	Type	Description
type	String	DB engine.
version	String	DB version. For details about supported DB versions, see Querying Version Information About a DB Engine .

Status code: 400

Table 4-213 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-214** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying automated backups generated from July 6, 2020 to July 16, 2020

```
GET https://{endpoint}/v3/97b026aa9cc4417888c14c84a1ad9860/backups?
instance_id=43e4feaab48f11e89039fa163ebaa7e4br01&backup_id=c0c9f155c7b7423a9d30f0175998b63bbr0
1&backup_type=auto&offset=0&limit=10&begin_time=2020-07-06T10:41:14+0800&end_time=2020-07-16T1
0:41:14+0800
```

Example Response

Status code: 200

Success.

```
{
  "backups": [ {
    "id": "1fe4feaab48f11e6654hfa163eba87e4b66u",
    "name": "GaussDBforMySQL-gauss-e747-20200705185048266",
    "begin_time": "2018-08-06T12:41:14+0800",
    "end_time": "2018-08-06T12:45:14+0800",
    "take_up_time": 2,
    "status": "COMPLETED",
    "type": "auto",
    "size": 2803,
    "datastore": {
      "type": "GaussDB(for MySQL)",
      "version": "8.0"
    },
    "instance_id": "43e4feaab48f11e89039fa163ebaa7e4br01",
    "backup_level": "2"
  } ],
  "total_count": 1
}
```

Status Code

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

Error Code

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

4.4.4 Querying an Automated Backup Policy

Function

This API is used to query an automated backup policy. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-215 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	Yes	String	Instance ID, which is compliant with the UUID format.

Request Parameters

Table 4-216 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none"> en-us zh-cn

Response Parameters

Status code: 200

Table 4-217 Response body parameters

Parameter	Type	Description
backup_policy	BackupPolicy object	Backup policy information.

Table 4-218 BackupPolicy

Parameter	Type	Description
keep_days	Integer	Backup retention days. Value: 1 to 732
start_time	String	Backup time window. Automated backups will be triggered during the backup time window. The value must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format.
period	String	Backup cycle configuration. Data will be automatically backed up on the selected days every week. The value is a number separated by commas (,), indicating the days of the week.
retention_number_backup_level1	Integer	Number of retained level-1 backups. This parameter is returned when level-1 backup is enabled.

Status code: 400

Table 4-219 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-220** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying the automated backup policy of a DB instance

```
GET https://{endpoint}/v3/619d3e78f61b4be68bc5aa0b59edcf7b/instances/  
61a4ea66210545909d74a05c27a7179ein07/backups/policy
```

Example Response

Status code: 200

Success.

```
{  
  "backup_policy": {  
    "keep_days": "7",  
    "start_time": "19:00-20:00",  
    "period": "1,2",  
    "retention_num_backup_level1": 1  
  }  
}
```

Status Code

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

Error Code

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

4.4.5 Deleting a Manual Backup

Function

This API is used to delete a manual backup. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-221 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
backup_id	Yes	String	Backup file ID. To obtain this value, see Querying Backups .

Request Parameters

Table 4-222 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-223 Response body parameters

Parameter	Type	Description
job_id	String	Task ID.

Status code: 400

Table 4-224 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-225 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Deleting a manual backup

```
DELETE https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/backups/  
1fe4feaab48f11e6654hfa163eba87e4b66
```

Example Response

Status code: 200

Success.

```
{  
  "job_id" : "04efe8e2-9255-44ae-a98b-d87cae422890"  
}
```

Status Code

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

Error Code

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

4.4.6 Restoring Data to the Original Instance or an Existing Instance

Function

This API is used to restore data to the original instance or an existing instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

Constraints

DB instances will not be displayed unless they have the same DB engine type, version, and table name case sensitivity as the original DB instance.

URI

POST /v3/{project_id}/instances/restore

Table 4-226 URI parameters

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

Request Parameters

Table 4-227 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-228 Request body parameters

Parameter	Mandatory	Type	Description
target_instance_id	Yes	String	Target instance ID.
source_instance_id	Yes	String	Source instance ID.
backup_id	No	String	ID of the backup to be restored. This parameter must be specified when the backup file is used for restoration. To obtain this value, see Querying Backups .
restore_time	No	Long	Time point of data restoration in the UNIX timestamp format. The unit is millisecond and the time zone is UTC.
type	Yes	String	Restoration type. Value: <ul style="list-style-type: none">• backup: indicates restoration from backup files. backup_id is mandatory when type is not mandatory.• timestamp: indicates the point-in-time restoration. type is mandatory and restore_time is mandatory.

Response Parameters

Status code: 200

Table 4-229 Response body parameters

Parameter	Type	Description
job_id	String	Workflow ID.

Status code: 400**Table 4-230** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-231** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

- Restoring data to the original instance using a backup file
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/restore
{
 "target_instance_id" : "7033e7c3cf93438797d44ad7ae0a7d95in07",
 "source_instance_id" : "690e08a7c3854c218df0e59de3b0c6cein07",
 "backup_id" : "7ffbf305376b4cbea0ae491257b6aaf9br07",
 "type" : "backup"
}
- Restoring data to the original instance through PITR
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/restore
{
 "target_instance_id" : "7033e7c3cf93438797d44ad7ae0a7d95in07",
 "source_instance_id" : "690e08a7c3854c218df0e59de3b0c6cein07",
 "restore_time" : 1673852043000,
 "type" : "timestamp"
}
- Restoring data to an existing instance using a backup file
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/restore
{
 "target_instance_id" : "7033e7c3cf93438797d44ad7ae0a7d95in07",
 "source_instance_id" : "690e08a7c3854c218df0e59de3b0c6cein07",
 "backup_id" : "be4ddfd7e2b94640b5e2cb44efb30b22br07",
 "type" : "backup"
}
- Restoring data to an existing instance through PITR

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/restore
{
  "target_instance_id" : "7033e7c3cf93438797d44ad7ae0a7d95in07",
  "source_instance_id" : "690e08a7c3854c218df0e59de3b0c6cein07",
  "restore_time" : 1673852043000,
  "type" : "timestamp"
}
```

Example Response

Status code: 200

Success.

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

Status Code

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

Error Code

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

4.4.7 Querying the Restoration Time Range

Function

This API is used to query the restoration time range of an instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/instances/{instance_id}/restore-time

Table 4-232 URI parameters

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

Table 4-233 Query parameters

Parameter	Mandatory	Type	Description
date	No	String	Date to be queried. The value is in the "yyyy-mm-dd" format, and the time zone is UTC.

Request Parameters

Table 4-234 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-235 Response body parameters

Parameter	Type	Description
restore_times	Array of RestoreTimeInfo objects	Restoration time ranges.

Table 4-236 RestoreTimeInfo

Parameter	Type	Description
start_time	Integer	Start time of the restoration time range in the UNIX timestamp format. The unit is millisecond and the time zone is UTC.
end_time	Integer	End time of the restoration time range in the UNIX timestamp format. The unit is millisecond and the time zone is UTC.

Status code: 400**Table 4-237** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-238** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying the restoration time range of the DB instance on January 31, 2023

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/  
096c0fc43e804757b59946b80dc27f8bin07/restore-time?date=2023-01-31
```

Example Response

Status code: 200

Success.

```
{  
  "restore_times": [ {  
    "start_time": 1675149246000,  
    "end_time": 1675094400000  
  } ]  
}
```

Status Code

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

Error Code

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

4.5 Parameter Template Management

4.5.1 Querying Parameter Templates

Function

This API is used to query parameter templates, including all databases' default and custom parameter templates. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/configurations

Table 4-239 URI parameters

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

Table 4-240 Query parameters

Parameter	Mandatory	Type	Description
offset	No	Integer	Index offset. If offset is set to N , the resource query starts from the $N+1$ piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number.

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records to be queried. The default value is 100 . The value must be a positive integer. The minimum value is 1 and the maximum value is 100 .

Request Parameters

Table 4-241 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-242 Response body parameters

Parameter	Type	Description
configurations	Array of ConfigurationSummary objects	Parameter template information.
total_count	Integer	Total number of parameter templates.

Table 4-243 ConfigurationSummary

Parameter	Type	Description
id	String	Parameter template ID.
name	String	Parameter template name.
description	String	Parameter template description.
datastore_version_name	String	DB version.
datastore_name	String	Database name.
created	String	Creation time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
updated	String	Update time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
user_defined	Boolean	Whether the parameter template is a custom template. Value: <ul style="list-style-type: none">● false: The parameter template is a default template.● true: The parameter template is a custom template.

Status code: 400**Table 4-244** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-245 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying parameter templates

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/configurations
```

Example Response

Status code: 200

Success.

```
{
  "total_count": 1,
  "configurations": [ {
    "id": "887ea0d1bb0843c49e8d8e5a09a95652pr07",
    "name": "configuration_test",
    "description": "configuration_test",
    "datastore_version_name": "8.0",
    "datastore_name": "GaussDB(for MySQL)",
    "created": "2019-05-15T11:53:34+0000",
    "updated": "2019-05-15T11:53:34+0000",
    "user_defined": true
  }, {
    "id": "3bc1e9cc0d34404b9225ed7a58fb284epr07",
    "name": "Default-GaussDBforMySQL",
    "description": "Default parameter template for GaussDBforMySQL",
    "datastore_version_name": "8.0",
    "datastore_name": "GaussDB(for MySQL)",
    "created": "2019-05-27T03:38:51+0000",
    "updated": "2019-05-27T03:38:51+0000",
    "user_defined": false
  } ]
}
```

Status Code

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

Error Code

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

4.5.2 Creating a Parameter Template

Function

This API is used to create a parameter template. The following information needs to be configured: template name, description, DB engine version, and parameter values. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

Constraints

- This API is available only for GaussDB(for MySQL) primary/standby instances (dedicated edition).
- The name of the custom parameter template is case-sensitive and must be different from the name of an existing or a default parameter template.
- The value of **parameter_values** in the custom parameter template must be within the default value range of the specified database version.

URI

POST /v3/{project_id}/configurations

Table 4-246 URI parameters

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

Request Parameters

Table 4-247 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-248 Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter template name. Value: The template name can contain 1 to 64 characters. Only letters (case-sensitive), digits, hyphens (-), underscores (_), and periods (.) are allowed.
description	No	String	Parameter template description. The value is left blank by default. Value: The description can consist of up to 256 characters, and cannot contain the carriage return characters or special characters (!<"='>&).
parameter_values	No	Map<String,String>	Mapping between parameter names and parameter values. You can specify parameter values based on a default parameter template.
datastore	No	DatastoreResult object	Database object.

Table 4-249 DatastoreResult

Parameter	Mandatory	Type	Description
type	Yes	String	DB engine. Currently, only gaussdb-mysql is supported.
version	Yes	String	DB version. For details about supported DB versions, see Querying Version Information About a DB Engine .

Response Parameters

Status code: 200

Table 4-250 Response body parameters

Parameter	Type	Description
configurations	ConfigurationSummary2 object	Parameter template information.

Table 4-251 ConfigurationSummary2

Parameter	Type	Description
id	String	Parameter template ID.
name	String	Parameter template name.
description	String	Parameter template description.
datastore	DatastoreResult object	Database object.
created	String	Creation time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between calendar and hourly notation of time. Z indicates the time zone offset.
updated	String	Update time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between calendar and hourly notation of time. Z indicates the time zone offset.

Table 4-252 DatastoreResult

Parameter	Type	Description
type	String	DB engine. Currently, only gaussdb-mysql is supported.
version	String	DB version. For details about supported DB versions, see Querying Version Information About a DB Engine .

Status code: 400

Table 4-253 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-254** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Creating a parameter template (There are up to 10 concurrent connections for the account.)

```
POST https://{endpoint}/v3/056538411200d4cd2f79c003c7606412/configurations
{
  "name" : "myparameter",
  "description" : "parameter1",
  "datastore" : {
    "type" : "gaussdb-mysql",
    "version" : "8.0"
  },
  "parameter_values" : {
    "max_user_connections" : "10"
  }
}
```

Example Response

Status code: 200

Success.

```
{
  "configurations" : {
    "id" : "887ea0d1bb0843c49e8d8e5a09a95652pr07",
    "name" : "myparameter",
    "description" : "parameter1",
    "datastore" : {
      "type" : "gaussdb-mysql",
      "version" : "8.0"
    },
    "created" : "2022-05-15T11:53:34+0000",
    "updated" : "2022-05-15T11:53:34+0000"
  }
}
```

Status Code

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

Error Code

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

4.5.3 Deleting a Parameter Template

Function

This API is used to delete a specified parameter template. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

Constraints

- This API is suitable only for GaussDB(for MySQL) instances.
- Default parameter templates cannot be deleted.

URI

DELETE /v3/{project_id}/configurations/{configuration_id}

Table 4-255 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
configuration_id	Yes	String	Parameter template ID.

Request Parameters

Table 4-256 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200**Table 4-257** Response body parameters

Parameter	Type	Description
configuration_id	String	Parameter template ID.
configuration_name	String	Parameter template name.

Status code: 400**Table 4-258** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-259 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Deleting a parameter template

```
DELETE https://{endpoint}/v3/056538411200d4cd2f79c003c7606412/configurations/  
43570e0de32e40c5a15f831aa5ce4176pr07
```

Example Response

Status code: 200

Success.

```
{  
  "configuration_id" : "887ea0d1bb0843c49e8d8e5a09a95652pr07",  
  "configuration_name" : "myparameter"  
}
```

Status Code

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

Error Code

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

4.5.4 Obtaining Details About a Parameter Template

Function

This API is used to obtain parameter details of a specified parameter template. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

Constraints

This API is available only for GaussDB(for MySQL) primary/standby instances (dedicated edition).

URI

```
GET /v3/{project_id}/configurations/{configuration_id}
```

Table 4-260 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
configuration_id	Yes	String	Parameter template ID.

Request Parameters

Table 4-261 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-262 Response body parameters

Parameter	Type	Description
configurations	ConfigurationSummary2 object	Parameter template information.

Parameter	Type	Description
parameter_values	Map<String,String>	Mapping between parameter names and parameter values. You can specify parameter values based on a default parameter template.

Table 4-263 ConfigurationSummary2

Parameter	Type	Description
id	String	Parameter template ID.
name	String	Parameter template name.
description	String	Parameter template description.
datastore	DatastoreResult object	Database object.
created	String	Creation time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between calendar and hourly notation of time. Z indicates the time zone offset.
updated	String	Update time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between calendar and hourly notation of time. Z indicates the time zone offset.

Table 4-264 DatastoreResult

Parameter	Type	Description
type	String	DB engine. Currently, only gaussdb-mysql is supported.
version	String	DB version. To obtain details about supported DB engine versions, call the API for querying the DB engine versions .

Status code: 400**Table 4-265** Response body parameters

Parameter	Type	Description
error_code	String	Error code.

Parameter	Type	Description
error_msg	String	Error message.

Status code: 500

Table 4-266 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Obtaining details about a parameter template

```
GET https://{endpoint}/v3/0549b4a43100d4f32f51c01c2fe4acdb/configurations/  
7a8d539ba30f43adaf1b16d08b1df4bdpr07
```

Example Response

Status code: 200

Success.

```
{  
  "configurations" : {  
    "id" : "887ea0d1bb0843c49e8d8e5a09a95652pr07",  
    "name" : "myparameter",  
    "description" : "parameter1",  
    "datastore" : {  
      "type" : "gaussdb-mysql",  
      "version" : "8.0"  
    },  
    "created" : "2022-05-15T11:53:34+0000",  
    "updated" : "2022-05-15T11:53:34+0000"  
  },  
  "parameter_values" : {  
    "binlog_rows_query_log_events" : "OFF",  
    "mount_vip_when_failover" : "ON",  
    "log-bin" : "ON",  
    "gtid_mode" : "ON",  
    "enforce_gtid_consistency" : "ON",  
    "innodb_online_alter_log_max_size" : "134217728",  
    "binlog_gtid_simple_recovery" : "ON",  
    "max_user_connections" : "10"  
  }  
}
```

Status Code

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

Error Code

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

4.5.5 Modifying Parameters in a Parameter Template

Function

This API is used to modify parameters in a specified parameter template, including parameter names, descriptions, and values. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

Constraints

- This API is available only for GaussDB(for MySQL) primary/standby instances (dedicated edition).
- Default parameter templates cannot be modified.
- The name of the modified parameter template must be different from that of a default parameter template.
- The parameter values to be modified must be within the default value range of the specified database version.

URI

PUT /v3/{project_id}/configurations/{configuration_id}

Table 4-267 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
configuration_id	Yes	String	Parameter template ID.

Request Parameters

Table 4-268 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-269 Request body parameters

Parameter	Mandatory	Type	Description
name	No	String	Parameter template name. Value: The template name can contain 1 to 64 characters. Only letters (case-sensitive), digits, hyphens (-), underscores (_), and periods (.) are allowed. The parameter template description, parameter name, and parameter value mapping cannot be empty at the same time.

Parameter	Mandatory	Type	Description
description	No	String	Parameter template description. The value is left blank by default. Value: The description can consist of up to 256 characters, and cannot contain the carriage return characters or special characters (!<'=>&).
parameter_values	No	Map<String,String>	Mapping between parameter names and parameter values. You can specify parameter values based on a default parameter template. If this parameter is not specified, the original parameter information is retained.

Response Parameters

Status code: 200

Table 4-270 Response body parameters

Parameter	Type	Description
job_id	String	Task ID for modifying the parameter template.

Status code: 400

Table 4-271 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-272 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Modifying parameters in a parameter template

```
PUT https://{endpoint}/v3/0549b4a43100d4f32f51c01c2fe4acdb/configurations/  
7a8d539ba30f43adaf1b16d08b1df4bdpr07  
{  
  "parameter_values" : {  
    "max_user_connections" : "4"  
  }  
}
```

Example Response

Status code: 200

Success.

```
{  
  "job_id" : "f6cb21fe-186a-4931-b20d-764ced1f1f6b"  
}
```

Status Code

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

Error Code

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

4.5.6 Applying a Parameter Template

Function

This API is used to apply a parameter template to a specified DB instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

PUT /v3/{project_id}/configurations/{configuration_id}/apply

Table 4-273 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
configuration_id	Yes	String	Parameter template ID.

Request Parameters

Table 4-274 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-275 Request body parameter

Parameter	Mandatory	Type	Description
instance_ids	Yes	Array of strings	Instance IDs. Up to 10 instance IDs can be returned.

Response Parameters

Status code: 200

Table 4-276 Response body parameters

Parameter	Type	Description
job_id	String	Task ID for applying a parameter template.

Status code: 400**Table 4-277** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-278** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Applying a parameter template

```
PUT https://{endpoint}/v3/0549b4a43100d4f32f51c01c2fe4acdb/configurations/  
7a8d539ba30f43adaf1b16d08b1df4bdpr07/apply  
{  
  "instance_ids" : "1c3f12d626824d4ca357104def25a455in07"  
}
```

Example Response

Status code: 200

Success.

```
{  
  "job_id" : "bf26cf3c-d046-4080-bb45-f114be7afa5f"  
}
```

Status Code

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

Error Code

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

4.6 Quota Management

4.6.1 Querying the Instance Quotas of a Tenant

Function

This API is used to query the resource quotas of a specified tenant. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/project-quotas

Table 4-279 URI parameters

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

Table 4-280 Query parameters

Parameter	Mandatory	Type	Description
type	No	String	Quota of a specified type. Value: instance

Request Parameters

Table 4-281 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none"> en-us zh-cn

Response Parameters

Status code: 200

Table 4-282 Response body parameters

Parameter	Type	Description
quotas	project-quotas object	Tenant instance quota information.

Table 4-283 project-quotas

Parameter	Type	Description
resources	Array of resource objects	Resource list objects.

Table 4-284 resource

Parameter	Type	Description
type	String	Quota of a specified type. Its value is instance .
used	Integer	Number of created resources.
quota	Integer	Maximum resource quota.

Status code: 400**Table 4-285** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-286** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying the instance quotas of a tenant

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/project-quotas?type=instance
```

Example Response

Status code: 200

Success.

```
{
  "quotas": {
    "resources": [ {
      "type": "instance",
      "used": "4",
      "quota": 50
    } ]
  }
}
```

Status Code

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

Error Code

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

4.6.2 Querying the Resource Quotas of a Specified Enterprise Project

Function

This API is used to query the resource quotas of a specified enterprise project. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/quotas

Table 4-287 URI parameters

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

Table 4-288 Query parameters

Parameter	Mandatory	Type	Description
offset	No	String	Index offset. If offset is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number. Value: 0 to 10000

Parameter	Mandatory	Type	Description
limit	No	String	Number of records to be queried. The default value is 10 . The value must be a positive integer. The minimum value is 1 and the maximum value is 100 .
enterprise_project_name	No	String	Enterprise project name.

Request Parameters

Table 4-289 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-290 Response body parameters

Parameter	Type	Description
quota_list	Array of quota objects	Resource list objects.
total_count	Integer	Number of quota records.

Table 4-291 quota

Parameter	Type	Description
enterprise_project_id	String	Enterprise project ID.
enterprise_project_name	String	Enterprise project name.
instance_quota	Integer	Quota of the DB instance quantity.
vcpus_quota	Integer	Quota of vCPUs.
ram_quota	Integer	Memory quota in GB.
availability_instance_quota	Integer	Remaining quota of DB instances.
availability_vcpus_quota	Integer	Remaining quota of vCPUs.
availability_ram_quota	Integer	Remaining memory quota.

Status code: 400**Table 4-292** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-293** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying resource quotas

GET <https://{{endpoint}}/v3/054e292c9880d4992f02c0196d3ea468/quotas>

Example Response

Status code: 200

Success.

```
{
  "quota_list": [ {
    "enterprise_project_id": "0",
    "enterprise_project_name": "default",
    "instance_quota": 20,
    "vcpus_quota": 20,
    "ram_quota": 40,
    "availability_instance_quota": 1,
    "availability_vcpus_quota": 4,
    "availability_ram_quota": 8
  } ]
}
```

Status Code

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

Error Code

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

4.6.3 Configuring Resource Quotas for a Specified Enterprise Project

Function

This API is used to configure resource quotas for a specified enterprise project. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

POST /v3/{project_id}/quotas

Table 4-294 URI parameters

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

Request Parameters

Table 4-295 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-296 Request body parameters

Parameter	Mandatory	Type	Description
quota_list	Yes	Array of setQuota objects	Quota details. Up to 10 quota records can be configured at a time.

Table 4-297 setQuota

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	Enterprise project ID.
instance_quota	No	Integer	Instance quantity quota. Value: 0 to 100000 . NOTE (If there are already instances created, this parameter value must be greater than the number of existing instances.)

Parameter	Mandatory	Type	Description
vcpus_quota	No	Integer	vCPU quota. Value: 0 to 2147483646 . NOTE (If there are already instances created, this parameter value must be greater than the number of used vCPUs.)
ram_quota	No	Integer	Memory quota in GB. Value: 0 to 2147483646 . NOTE (If there are already instances created, this parameter value must be greater than the used memory size.)

Response Parameters

Status code: 200

Table 4-298 Response body parameters

Parameter	Type	Description
quota_list	Array of setQuota objects	Configured quota information.

Table 4-299 setQuota

Parameter	Type	Description
enterprise_project_id	String	Enterprise project ID.
instance_quota	Integer	Instance quantity quota.
vcpus_quota	Integer	vCPU quota.
ram_quota	Integer	Memory quota in GB.

Example Request

Configuring resource quotas

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/quotas
```

```
{
  "quota_list": [ {
    "enterprise_project_id": "0",
    "instance_quota": 20,
    "vcpus_quota": 20,
    "ram_quota": 40
  } ]
}
```

Example Response

Status code: 200

Success.

```
{
  "quota_list": [ {
    "enterprise_project_id": "0",
    "instance_quota": 20,
    "vcpus_quota": 20,
    "ram_quota": 40
  } ]
}
```

Status Code

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

Error Code

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

4.6.4 Modifying the Resource Quotas of a Specified Enterprise Project

Function

This API is used to modify the resource quotas of a specified enterprise project. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

PUT /v3/{project_id}/quotas

Table 4-300 URI parameters

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

Request Parameters

Table 4-301 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-302 Request body parameters

Parameter	Mandatory	Type	Description
quota_list	Yes	Array of setQuota objects	Enterprise project resource quotas to be updated. A maximum of 10 quotas can be updated at a time.

Table 4-303 setQuota

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	Enterprise project ID.
instance_quota	No	Integer	Instance quantity quota. Value: 0 to 100000 . NOTE (If there are already instances created, this parameter value must be greater than the number of existing instances.)

Parameter	Mandatory	Type	Description
vcpus_quota	No	Integer	vCPU quota. Value: 0 to 2147483646 . NOTE (If there are already instances created, this parameter value must be greater than the number of used vCPUs.)
ram_quota	No	Integer	Memory quota in GB. Value: 0 to 2147483646 . NOTE (If there are already instances created, this parameter value must be greater than the used memory size.)

Response Parameters

Status code: 200

Table 4-304 Response body parameters

Parameter	Type	Description
quota_list	Array of setQuota objects	Configured quota information.

Table 4-305 setQuota

Parameter	Type	Description
enterprise_project_id	String	Enterprise project ID.
instance_quota	Integer	Quota of the DB instance quantity.
vcpus_quota	Integer	Quota of vCPUs.
ram_quota	Integer	Memory quota in GB.

Status code: 400

Table 4-306 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-307** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Modifying the resource quotas of a specified enterprise project

```
PUT https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/quotas
{
  "quota_list": [ {
    "enterprise_project_id": "0",
    "instance_quota": 20,
    "vcpus_quota": 20,
    "ram_quota": 40
  } ]
}
```

Example Response

Status code: 200

Success.

```
{
  "quota_list": [ {
    "enterprise_project_id": "0",
    "instance_quota": 20,
    "vcpus_quota": 20,
    "ram_quota": 40
  } ]
}
```

Status Code

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

Error Code

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

4.7 Log Management

4.7.1 Querying Database Error Logs

Function

This API is used to query database error logs. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-308 URI parameters

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

Table 4-309 Query parameters

Parameter	Mandatory	Type	Description
start_date	Yes	String	Start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between calendar and hourly notation of time. Z indicates the time zone offset.
end_date	Yes	String	End time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between calendar and hourly notation of time. Z indicates the time zone offset. Only error logs generated within the last month can be queried.

Parameter	Mandatory	Type	Description
offset	No	Integer	Index offset. If offset is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number.
limit	No	Integer	Number of records to be queried. The default value is 100 . The value must be a positive integer. The minimum value is 1 and the maximum value is 100 .
level	No	String	Log level. The default value is ALL . Valid value: <ul style="list-style-type: none">• ALL• INFO• WARNING• ERROR• FATAL• NOTE
node_id	Yes	String	Node ID.

Request Parameters

Table 4-310 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none"> en-us zh-cn

Response Parameters

Status code: 200

Table 4-311 Response body parameters

Parameter	Type	Description
error_log_list	Array of MysqlErrorLogList objects	Error log details.
total_record	Integer	Total number of records.

Table 4-312 MysqlErrorLogList

Parameter	Type	Description
node_id	String	Node ID.
time	String	Time in the UTC format.
level	String	Log level. <ul style="list-style-type: none"> ALL INFO WARNING ERROR FATAL NOTE
content	String	Error log content.

Status code: 400

Table 4-313 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-314** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying database error logs

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/  
096c0fc43e804757b59946b80dc27f8bin07/errorlog?  
offset=0&limit=1&level=ALL&start_date=2022-07-10T00:00:00+0800&end_date=2022-07-19T00:00:00+0800&  
node_id=cc07c60e94ec4575989840e648fb4f66no07
```

Example Response

Status code: 200

Success.

```
{  
  "error_log_list" : [ {  
    "node_id" : "cc07c60e94ec4575989840e648fb4f66no07",  
    "time" : "2022-07-17T07:34:33",  
    "level" : "ERROR",  
    "content" : "[MY013508] [Repl] do failed: 1"  
  } ]  
}
```

Status Code

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

Error Code

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

4.7.2 Querying Database Slow Logs

Function

This API is used to query database slow logs. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-315 URI parameters

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

Table 4-316 Query parameters

Parameter	Mandatory	Type	Description
start_date	Yes	String	Start time in the "yyyy-mm-ddThh:mm:ssZ" format.
end_date	Yes	String	End time in the "yyyy-mm-ddThh:mm:ssZ" format. Only error logs generated within the last month can be queried.
offset	No	Integer	Index offset. If offset is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number.

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records to be queried. The default value is 100 . The value must be a positive integer. The minimum value is 1 and the maximum value is 100 .
type	No	String	Statement type. The default value All . If this parameter is left empty, all statement types are queried. Valid value: <ul style="list-style-type: none">• ALL• INSERT• UPDATE• SELECT• DELETE• CREATE• DROP• ALTER
node_id	Yes	String	Node ID.

Request Parameters

Table 4-317 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-318 Response body parameters

Parameter	Type	Description
slow_log_list	Array of MysqlSlowLogList objects	Error log details.
long_query_time	String	Slow query log threshold.
total_record	Integer	Total number of records.

Table 4-319 MysqlSlowLogList

Parameter	Type	Description
node_id	String	Node ID.
count	String	Number of executions.
time	String	Execution time.
lock_time	String	Lock wait time.
rows_sent	String	Number of sent rows.
rows_examined	String	Number of scanned rows.
database	String	Database which slow logs belong to.
users	String	Account.
query_sample	String	Execution syntax.
type	String	Statement type.
start_time	String	Start time in the UTC format.
client_ip	String	IP address.

Status code: 400

Table 4-320 Response body parameters

Parameter	Type	Description
error_code	String	Error code.

Parameter	Type	Description
error_msg	String	Error message.

Status code: 500

Table 4-321 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying slow logs whose statement type is INSERT

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/  
096c0fc43e804757b59946b80dc27f8bin07/slowlog?  
offset=0&limit=1&start_date=2022-07-10T00:00:00+0800&end_date=2022-07-19T00:00:00+0800&node_id=cc  
07c60e94ec4575989840e648fb4f66no07&type=INSERT
```

Example Response

Status code: 200

Success.

```
{  
  "slow_log_list" : [ {  
    "node_id" : "cc07c60e94ec4575989840e648fb4f66no07",  
    "count" : 1,  
    "time" : "1.04899 s",  
    "lock_time" : "0.00003 s",  
    "rows_sent" : 0,  
    "rows_examined" : 0,  
    "database" : "gaussdb-mysql",  
    "users" : "root",  
    "query_sample" : "INSERT INTO time_zone_name (Name, Time_zone_id) VALUES (N @time_zone_id);",  
    "type" : "INSERT",  
    "start_time" : "2121-03-25T10:55:16.000Z",  
    "client_ip" : "192.*.*.1"  
  } ],  
  "long_query_time" : 10,  
  "total_record" : 15  
}
```

Status Code

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

Error Code

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

4.7.3 Enabling or Disabling SQL Explorer

Function

This API is used to enable or disable SQL Explorer. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

POST /v3/{project_id}/instance/{instance_id}/audit-log/switch

Table 4-322 URI parameters

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

Request Parameters

Table 4-323 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-324 Request body parameter

Parameter	Mandatory	Type	Description
switch_status	Yes	String	Whether SQL Explorer is enabled. Value: <ul style="list-style-type: none">• ON: SQL Explorer is enabled.• OFF: SQL Explorer is disabled.

Response Parameters

Status code: 200

Table 4-325 Response body parameters

Parameter	Type	Description
result	String	Returned results for enabling or disabling SQL Explorer.

Status code: 400

Table 4-326 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-327 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Enabling SQL Explorer

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instance/  
61a4ea66210545909d74a05c27a7179ein07/audit-log/status  
{  
  "switch_status" : "ON"  
}
```

Example Response

Status code: 200

Success.

```
{  
  "result" : "success"  
}
```

Status Code

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

Error Code

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

4.7.4 Querying Whether SQL Explorer Is Enabled

Function

This API is used to query whether SQL Explorer is enabled. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/instance/{instance_id}/audit-log/switch-status

Table 4-328 URI parameters

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

Request Parameters

Table 4-329 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200**Table 4-330** Response body parameters

Parameter	Type	Description
switch_status	String	Whether SQL Explorer is enabled. Value: <ul style="list-style-type: none">• ON: SQL Explorer is enabled.• OFF: SQL Explorer is disabled.

Status code: 400**Table 4-331** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-332 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying whether SQL Explorer is enabled

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instance/61a4ea66210545909d74a05c27a7179ein07/audit-log/switch-status
```

Example Response

Status code: 200

Success.

```
{  
  "switch_status" : "ON"  
}
```

Status Code

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

Error Code

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

4.8 Tag Management

4.8.1 Querying Resource Tags

Function

This API is used to query tags of a specified instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-333 URI parameters

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

Table 4-334 Query parameters

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

Request Parameters

Table 4-335 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-336 Response body parameters

Parameter	Type	Description
total_count	Integer	Total number of records.
tags	Array of ResourceTagItem objects	Tag list.

Table 4-337 ResourceTagItem

Parameter	Type	Description
key	String	Tag key.
value	String	Tag value.

Status code: 400

Table 4-338 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-339 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying resource tags

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/  
61a4ea66210545909d74a05c27a7179ein07/tags?offset=0&limit=2
```

Example Response

Status code: 200

Success.

```
{  
  "total_count": 2,  
  "tags": [{  
    "key": "key1",  
    "value": "value1"  
  }, {  
    "key": "key2",  
    "value": "value2"  
  }]  
}
```

Status Code

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

Error Code

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

4.8.2 Querying Project Tags

Function

This API is used to query all tags of instances in a specified project. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

```
GET /v3/{project_id}/tags
```


Table 4-340 URI parameters

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

Table 4-341 Query parameters

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

Request Parameters

Table 4-342 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-343 Response body parameters

Parameter	Type	Description
total_count	Integer	Total number of records.
tags	Array of ProjectTagItem objects	Tag list.

Table 4-344 ProjectTagItem

Parameter	Type	Description
key	String	Tag key.
values	Array of strings	Tag value.

Status code: 400

Table 4-345 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-346 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying project tags

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/tags?offset=0&limit=2
```

Example Response

Status code: 200

Success.

```
{
  "total_count": 2,
  "tags": [ {
    "key": "key1",
    "values": [ "value1", "value2" ]
  }, {
    "key": "key2",
    "values": [ "value3", "value4" ]
  } ]
}
```

Status Code

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

Error Code

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

4.8.3 Adding or Deleting Tags in Batches

Function

This API is used to add tags to or delete tags from a specified DB instance in batches. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

```
POST /v3/{project_id}/instances/{instance_id}/tags/action
```

Table 4-347 URI parameters

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

Request Parameters

Table 4-348 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-349 Request body parameters

Parameter	Mandatory	Type	Description
action	Yes	String	Operation identifier. Value: <ul style="list-style-type: none">• create: adding tags• delete: deleting tags
tags	Yes	Array of TagItem objects	Tag list.

Table 4-350 TagItem

Parameter	Mandatory	Type	Description
key	Yes	String	Tag key. It contains a maximum of 36 Unicode characters and cannot be null, an empty string, or a space. Only digits, uppercase letters, lowercase letters, underscores (_), and hyphens (-) are allowed.
value	No	String	Tag value. It contains a maximum of 43 Unicode characters. It can be an empty string but cannot be a space. Only digits, uppercase letters, lowercase letters, underscores (_), periods (.), and hyphens (-) are allowed. <ul style="list-style-type: none">• If action is set to create, this parameter is mandatory.• If action is set to delete and value is specified, tags are deleted by key and value. If value is not specified, tags are deleted by key.

Response Parameters

Status code: 400

Table 4-351 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-352 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

- Adding tags in batches

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/61a4ea66210545909d74a05c27a7179ein07/tags/action
{
  "action": "create",
  "tags": [ {
    "key": "key1",
    "value": "value1"
  }, {
    "key": "key2",
    "value": "value2"
  } ]
}
```

- Deleting tags in batches

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/61a4ea66210545909d74a05c27a7179ein07/tags/action
{
  "action": "delete",
  "tags": [ {
    "key": "key1"
  }, {
    "key": "key2",
    "value": "value2"
  } ]
}
```

Example Response

None

Status Code

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

Error Code

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

4.9 Database User Management

4.9.1 Creating a Database Account

Function

This API is used to create a database account for a GaussDB(for MySQL) instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

POST /v3/{project_id}/instances/{instance_id}/db-users

Table 4-353 URI parameters

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

Request Parameters

Table 4-354 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-355 Request body parameter

Parameter	Mandatory	Type	Description
users	Yes	Array of CreateDatabaseUserList objects	List of database users. The list contains up to 50 database users.

Table 4-356 CreateDatabaseUserList

Parameter	Mandatory	Type	Description
name	Yes	String	Database username. The value can contain 1 to 32 characters, including letters, digits, and underscores (_).
comment	No	String	Database remarks. The value can consist of up to 512 characters, and cannot contain the carriage return characters or special characters (!<"='>&). This field is only suitable for instances 2.0.13.0 or later.
password	Yes	String	Password of the database user. The value cannot be empty and must consist of 8 to 32 characters and contain at least three types of the following: uppercase letters, lowercase letters, digits, and special characters (~!@#\$\$%^*_-=+?, ()&). You are advised to enter a strong password to improve security and prevent security risks such as brute force cracking.

Parameter	Mandatory	Type	Description
hosts	No	Array of strings	Host IP address. The default value is %, indicating that all IP addresses are allowed to access your GaussDB(for MySQL) instance. If its value is 10.10.10. % , all 10.10.10.X IP addresses can access your GaussDB(for MySQL) instance. You can add up to 50 IP addresses and separate them with commas (,), for example, 192.168.0.1,172.16.213.9 (no spaces before and after the comma).
databases	No	Array of CreateDatabaseList objects	List of the databases. The list contains up to 50 databases. When you create a database user, you can authorize the permissions of databases in the list to the user. If there is no database in the list, you can invoke an API to authorize database permissions to the database user.

Table 4-357 CreateDatabaseList

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

Response Parameters

Status code: 201

Table 4-358 Response body parameters

Parameter	Type	Description
job_id	String	ID of the task for creating a database account.

Status code: 400**Table 4-359** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-360** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Creating a database user with the read/write permission (The host IP address is 127.0.0.1.)

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/
a23fb62bd61e4e9e9636fd2225f395bein07/db-users
{
  "users": [ {
    "name": "gaussdb_mysql_user1",
    "password": "Rds_1234",
    "hosts": [ "127.0.0.1" ],
    "databases": [ {
      "name": "test",
      "readonly": false
    } ]
  } ]
}
```

Example Response

Status code: 201

Success.

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

Status Code

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

Error Code

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

4.9.2 Querying Database Users

Function

This API is used to query database users of a GaussDB(for MySQL) instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/instances/{instance_id}/db-users

Table 4-361 URI parameters

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

Table 4-362 Query parameters

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

Request Parameters

Table 4-363 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-364 Response body parameters

Parameter	Type	Description
users	Array of ListGaussMySQLDatabaseUser objects	List of database users.
total_count	Integer	Total number of database users of a DB instance.

Table 4-365 ListGaussMySQLDatabaseUser

Parameter	Type	Description
name	String	Database username.
host	String	Host IP address.
comment	String	Remarks of the database account.

Parameter	Type	Description
databases	Array of ListGaussMySqlDatabase objects	List of databases.

Table 4-366 ListGaussMySqlDatabase

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

Status code: 400**Table 4-367** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-368** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying database users

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/  
a23fb62bd61e4e9e9636fd2225f395bein07/db-users?offset=0&limit=100
```

Example Response

Status code: 200

Success.

```
{
  "users": [ {
    "name": "gaussdb_mysql_user1",
    "host": "127.0.0.1",
    "databases": [ {
      "name": "test",
      "readonly": false
    } ]
  } ],
  "total_count": 1
}
```

Status Code

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

Error Code

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

4.9.3 Deleting a Database User

Function

This API is used to delete a database user. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

DELETE /v3/{project_id}/instances/{instance_id}/db-users

Table 4-369 URI parameters

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

Request Parameters

Table 4-370 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-371 Request body parameter

Parameter	Mandatory	Type	Description
users	Yes	Array of ListDeleteDatabaseUserRequest objects	List of database users to be deleted. The list contains up to 50 database users.

Table 4-372 ListDeleteDatabaseUserRequest

Parameter	Mandatory	Type	Description
name	Yes	String	Database username.
host	Yes	String	Host IP address.

Response Parameters

Status code: 202

Table 4-373 Response body parameters

Parameter	Type	Description
job_id	String	ID of the task for deleting database users.

Status code: 400**Table 4-374** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-375** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Deleting the database user whose host IP address is 127.0.0.1

```
{
  "users": [ {
    "name": "gaussdb_mysql_user1",
    "host": "127.0.0.1"
  } ]
}
```

Example Response

Status code: 202

Success.

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

Status Code

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

Error Code

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

4.9.4 Modifying Remarks of a Database User

Function

This API is used to modify the remarks of a database user. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

PUT /v3/{project_id}/instances/{instance_id}/db-users/comment

Table 4-376 URI parameters

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

Request Parameters

Table 4-377 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-378 Request body parameters

Parameter	Mandatory	Type	Description
users	Yes	Array of UpdateDatabaseUserComment objects	List of database users that you want to change the remarks for. The list contains up to 50 database users.

Table 4-379 UpdateDatabaseUserComment

Parameter	Mandatory	Type	Description
name	Yes	String	Database username.
host	Yes	String	Host IP address.
comment	Yes	String	Database user remarks. The value can consist of up to 512 characters, and cannot contain the carriage return characters or special characters (!<"='>&). This field is only suitable for instances 2.0.13.0 or later.

Response Parameters

Status code: 202

Table 4-380 Response body parameters

Parameter	Type	Description
job_id	String	ID of the task for changing the remarks of the database user.

Status code: 400

Table 4-381 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-382 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Modifying remarks of a database user

```
PUT https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/
a23fb62bd61e4e9e9636fd2225f395bein07/db-users/comment
{
  "users" : [ {
    "name" : "gaussdb_mysql_user1",
    "host" : "127.0.0.1",
    "comment" : "first_database_user"
  } ]
}
```

Example Response

Status code: 202

Success.

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

Status Code

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

Error Code

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

4.9.5 Changing Password of a Database User

Function

This API is used to change password of a database user. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

PUT /v3/{project_id}/instances/{instance_id}/db-users/password

Table 4-383 URI parameters

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

Request Parameters

Table 4-384 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-385 Request body parameter

Parameter	Mandatory	Type	Description
users	Yes	Array of ResetDatabasePassword objects	List of database users that you want to change the passwords for. The list contains up to 50 database users.

Table 4-386 ResetDatabasePassword

Parameter	Mandatory	Type	Description
name	Yes	String	Database username.
host	Yes	String	Host IP address.
password	Yes	String	Password of the database user. The value can consist of 8 to 32 characters and contain at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters (~!@#\$\$%^*_-=+?, ()&). You are advised to enter a strong password to improve security and prevent security risks such as brute force cracking.

Response Parameters

Status code: 202

Table 4-387 Response body parameters

Parameter	Type	Description
job_id	String	ID of the task for changing the passwords of database users.

Status code: 400

Table 4-388 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-389 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Changing password of database user **gaussdb_mysql_user1**

```
{
  "users": [ {
    "name": "gaussdb_mysql_user1",
    "host": "127.0.0.1",
    "password": "Rds_1234"
  } ]
}
```

Example Response

Status code: 202

Success.

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

Status Code

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

Error Code

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

4.9.6 Authorizing Permissions to a Database User

Function

This API is used to authorize permissions to a database user. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

POST /v3/{project_id}/instances/{instance_id}/db-users/privilege

Table 4-390 URI parameters

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

Request Parameters

Table 4-391 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-392 Request body parameter

Parameter	Mandatory	Type	Description
users	Yes	Array of GrantDatabasePermission objects	List of database users. The list contains up to 50 database users.

Table 4-393 GrantDatabasePermission

Parameter	Mandatory	Type	Description
name	Yes	String	Database username.
host	Yes	String	Host IP address.
databases	Yes	Array of DatabasePermission objects	List of databases. The list contains up to 50 databases.

Table 4-394 DatabasePermission

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

Response Parameters

Status code: 201

Table 4-395 Response body parameters

Parameter	Type	Description
job_id	String	ID of the task for authorizing the database permissions to a user.

Status code: 400

Table 4-396 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-397 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Authorizing the read/write permission to a database user

```
{
  "users": [ {
    "name": "gaussdb_mysql_user1",
    "host": "127.0.0.1",
    "databases": [ {
      "name": "test",
      "readonly": false
    } ]
  } ]
}
```

Example Response

Status code: 201

Success.

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

Status Code

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

Error Code

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

4.9.7 Deleting Permissions of a Database User

Function

This API is used to delete permissions of a database user. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

DELETE /v3/{project_id}/instances/{instance_id}/db-users/privilege

Table 4-398 URI parameters

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

Request Parameters

Table 4-399 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-400 Request body parameter

Parameter	Mandatory	Type	Description
users	Yes	Array of DeleteDatabasePermission objects	List of database users. The list contains up to 50 database users.

Table 4-401 DeleteDatabasePermission

Parameter	Mandatory	Type	Description
name	Yes	String	Database username.
host	Yes	String	Host IP address.
databases	Yes	Array of strings	List of databases.

Response Parameters

Status code: 202

Table 4-402 Response body parameters

Parameter	Type	Description
job_id	String	ID of the task for deleting database permissions of database users.

Status code: 400

Table 4-403 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-404 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Deleting permissions of database user **gaussdb_mysql_user1**

```
{  
  "users" : [ {
```

```
"name" : "gaussdb_mysql_user1",  
"host" : "127.0.0.1",  
"databases" : [ "test" ]  
}]  
}
```

Example Response

Status code: 202

Success.

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

Status Code

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

Error Code

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

4.10 Database Management

4.10.1 Querying Available Database Character Sets

Function

This API is used to query available database character sets of a GaussDB(for MySQL) instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/instances/{instance_id}/databases/charsets

Table 4-405 URI parameters

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

Request Parameters

Table 4-406 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-407 Response body parameters

Parameter	Type	Description
charsets	Array of strings	List of database character sets.

Status code: 400

Table 4-408 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-409 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying available database character sets

Example Response

Status code: 200

Success.

```
{  
  "charsets": [ "utf8mb4", "gbk" ]  
}
```

Status Code

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

Error Code

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

4.10.2 Creating a Database

Function

This API is used to create a database for a GaussDB(for MySQL) instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-410 URI parameters

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

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Instance ID.

Request Parameters

Table 4-411 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-412 Request body parameter

Parameter	Mandatory	Type	Description
databases	Yes	Array of CreateGaussMySQLDatabase objects	Database information list. The list contains up to 50 databases.

Table 4-413 CreateGaussMySQLDatabase

Parameter	Mandatory	Type	Description
name	Yes	String	Database name. The name can contain 1 to 64 characters. Only letters, digits, and underscores (_) are allowed.

Parameter	Mandatory	Type	Description
comment	No	String	Database remarks. The value can consist of up to 512 characters, and cannot contain the carriage return characters or special characters (!<"='>&).
character_set	Yes	String	Database character set, for example, utf8mb4 or gbk .
users	No	Array of GaussMySQLDatabaseUser objects	List of database users. The list contains up to 50 database users. When you create a database, you can authorize the database permissions to the users in the list. If there is no database user in the list, you cannot authorize the database permissions to database users when creating a database. If you need to authorize the database permissions to a database user later, call the API (Authorizing Permissions to a Database User).

Table 4-414 GaussMySQLDatabaseUser

Parameter	Mandatory	Type	Description
name	Yes	String	Database username.
host	Yes	String	Host IP address.
readonly	Yes	Boolean	Whether the permission is read-only. Value: <ul style="list-style-type: none"> ● true: read-only ● false: read/write

Response Parameters

Status code: 201

Table 4-415 Response body parameters

Parameter	Type	Description
job_id	String	ID of the task for creating a database.

Status code: 400**Table 4-416** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-417** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Creating a database (with utf8mb4 as character set and read/write permission)

```
{
  "databases": [ {
    "name": "test",
    "character_set": "utf8mb4",
    "users": [ {
      "name": "gaussdb_mysql_user1",
      "host": "127.0.0.1",
      "readonly": false
    } ]
  } ]
}
```

Example Response

Status code: 201

Success.

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

Status Code

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

Error Code

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

4.10.3 Modifying Database Remarks

Function

This API is used to modify database remarks of a GaussDB(for MySQL) instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

PUT /v3/{project_id}/instances/{instance_id}/databases/comment

Table 4-418 URI parameters

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

Request Parameters

Table 4-419 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none"> en-us zh-cn

Table 4-420 Request body parameters

Parameter	Mandatory	Type	Description
databases	Yes	Array of Table 4-421 objects	List of databases that you want to change the remarks for. The list contains up to 50 databases.

Table 4-421 UpdateDatabaseComment

Parameter	Mandatory	Type	Description
name	Yes	String	Database name.
comment	Yes	String	Database remarks. Value: The value can consist of up to 512 characters, and cannot contain the carriage return characters or special characters (!<"='>&).

Response Parameters

Status code: 202

Table 4-422 Response body parameters

Parameter	Type	Description
job_id	String	ID of the task for changing database remarks.

Status code: 400

Table 4-423 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-424 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Modifying database remarks

```
PUT https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instances/  
a23fb62bd61e4e9e9636fd2225f395bein07/databases/comment
```

```
{  
  "databases": [{  
    "name": "gaussdb_mysql_user1",  
    "comment": "first_database"  
  }]  
}
```

Example Response

Status code: 202

Success.

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

Status Code

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

Error Code

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

4.10.4 Querying Databases

Function

This API is used to query databases of a GaussDB(for MySQL) instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-425 URI parameters

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

Table 4-426 Query parameters

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

Request Parameters

Table 4-427 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-428 Response body parameters

Parameter	Type	Description
databases	Array of ListGaussMySQLDatabaseInfo objects	Database information list.
total_count	Integer	Total number of databases.

Table 4-429 ListGaussMySQLDatabaseInfo

Parameter	Type	Description
name	String	Database name.
charset	String	Database character set, for example, utf8mb4 or gbk .

Parameter	Type	Description
users	Array of GaussMySqlDatabaseInfo objects	List of authorized database users.

Table 4-430 GaussMySqlDatabaseInfo

Parameter	Type	Description
name	String	Database username.
host	String	Host IP address.
readonly	Boolean	Whether the permission is read-only. Value: <ul style="list-style-type: none"> • true: read-only • false: read/write

Status code: 400

Table 4-431 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-432 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying databases

Example Response

Status code: 200

Success.

```
{
  "databases": [ {
    "name": "test",
    "charset": "utf8mb4",
    "users": [ {
      "name": "gaussdb-mysql-instance1",
      "host": "127.0.0.1",
      "readonly": false
    } ]
  } ],
  "total_count": 1
}
```

Status Code

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

Error Code

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

4.10.5 Deleting a Database

Function

This API is used to delete a database from a GaussDB(for MySQL) instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

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

Table 4-433 URI parameters

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

Request Parameters

Table 4-434 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-435 Request body parameter

Parameter	Mandatory	Type	Description
databases	Yes	Array of strings	List of databases to be deleted. The list contains up to 50 databases.

Response Parameters

Status code: 202

Table 4-436 Response body parameters

Parameter	Type	Description
job_id	String	ID of the task for deleting databases.

Status code: 400

Table 4-437 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-438** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Deleting databases

```
{  
  "databases" : [ "test" ]  
}
```

Example Response

Status code: 202

Success.

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

Status Code

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

Error Code

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

4.11 SQL Statement Concurrency Control

4.11.1 Enabling or Disabling SQL Statement Concurrency Control

Function

This API is used to enable or disable SQL Statement Concurrency Control. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

POST /v3/{project_id}/instances/{instance_id}/sql-filter/switch

Table 4-439 URI parameters

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

Request Parameters

Table 4-440 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-441 Request body parameter

Parameter	Mandatory	Type	Description
switch_status	Yes	String	Whether SQL Statement Concurrency Control is enabled. Value: <ul style="list-style-type: none">• ON: SQL Statement Concurrency Control is enabled.• OFF: SQL Statement Concurrency Control is disabled.

Response Parameters

Status code: 200

Table 4-442 Response body parameters

Parameter	Type	Description
job_id	String	ID of the task for enabling or disabling SQL Statement Concurrency Control.

Status code: 400

Table 4-443 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-444 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

- Enabling SQL Statement Concurrency Control

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instance/af315b8e6aaa41799bd9a31f2de15abcin07/sql-filter/switch
{
  "switch_status" : "ON"
}
```

- Disabling SQL Statement Concurrency Control

```
POST https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instance/af315b8e6aaa41799bd9a31f2de15abcin07/sql-filter/switch
{
  "switch_status" : "OFF"
}
```

Example Response

Status code: 200

Success.

```
{
  "job_id" : "aef6a470-fb63-4d5b-b644-12ead7e019b3"
}
```

Status Code

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

Error Code

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

4.11.2 Querying Whether SQL Statement Concurrency Control Is Enabled

Function

This API is used to query whether SQL Statement Concurrency Control is enabled. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/instances/{instance_id}/sql-filter/switch

Table 4-445 URI parameters

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

Request Parameters

Table 4-446 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-447 Response body parameters

Parameter	Type	Description
switch_status	String	Whether SQL Statement Concurrency Control is enabled. Value: <ul style="list-style-type: none">• ON: enabled• OFF: disabled

Status code: 400**Table 4-448** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-449** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying whether SQL Statement Concurrency Control is enabled

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instance/af315b8e6aaa41799bd9a31f2de15abcin07/sql-filter/switch
```

Example Response**Status code: 200**

Success.

```
{  
  "switch_status": "ON"  
}
```

Status Code

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

Error Code

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

4.11.3 Configuring Concurrency Control Rules of SQL Statements

Function

This API is used to configure concurrency control rules of SQL statements. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

PUT /v3/{project_id}/instances/{instance_id}/sql-filter/rules

Table 4-450 URI parameters

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

Request Parameters

Table 4-451 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-452 Request body parameter

Parameter	Mandatory	Type	Description
sql_filter_rules	Yes	Array of NodeSqlFilterRuleInfo objects	Concurrency control rules of SQL statements for nodes.

Table 4-453 NodeSqlFilterRuleInfo

Parameter	Mandatory	Type	Description
node_id	Yes	String	Node ID.
rules	Yes	Array of NodeSqlFilterRule objects	Concurrency control rules of SQL statements. The sql_type value must be unique.

Table 4-454 NodeSqlFilterRule

Parameter	Mandatory	Type	Description
sql_type	Yes	String	SQL statement type. Valid value: <ul style="list-style-type: none">• SELECT• UPDATE• DELETE
patterns	Yes	Array of NodeSqlFilterRulePattern objects	Concurrency control rules of SQL statements.

Table 4-455 NodeSqlFilterRulePattern

Parameter	Mandatory	Type	Description
pattern	Yes	String	A concurrency control rule of SQL statements. A rule can consist of up to 128 keywords. The keywords are separated by tildes (~), for example, select~from~t1 . The rule cannot contain backslashes (\), commas (,), or double tildes (~~). It cannot end with tildes (~).

Parameter	Mandatory	Type	Description
max_concurrency	Yes	Integer	Maximum number of concurrent SQL statements. Value: a non-negative integer.

Response Parameters

Status code: 200

Table 4-456 Response body parameters

Parameter	Type	Description
job_id	String	ID of the task for configuring concurrency control rules of SQL statements.

Status code: 400

Table 4-457 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-458 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Configuring concurrency control rules of SQL statements (SQL statement types include SELECT, UPDATE, and DELETE.)

```
PUT https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instance/af315b8e6aaa41799bd9a31f2de15abcin07/sql-filter/rules
{
  "sql_filter_rules": [ {
    "node_id": "c01a5645eb2c4fb6a9373542f5366e50no07",
```

```
"rules": [ {
  "sql_type": "SELECT",
  "patterns": [ {
    "pattern": "select~from~t1",
    "max_concurrency": 0
  }, {
    "pattern": "select~from~t3~where~id",
    "max_concurrency": 10
  } ]
}, {
  "sql_type": "UPDATE",
  "patterns": [ {
    "pattern": "update~t3~where~id",
    "max_concurrency": 10
  } ]
} ]
}, {
  "node_id": "b234a5645eb2c4ji3b9372342f5362397no07",
  "rules": [ {
    "sql_type": "SELECT",
    "patterns": [ {
      "pattern": "select~from~t3~where~id",
      "max_concurrency": 10
    } ]
  }, {
    "sql_type": "DELETE",
    "patterns": [ {
      "pattern": "delete~t3~where~id",
      "max_concurrency": 10
    } ]
  } ]
} ]
}
```

Example Response

Status code: 200

Success.

```
{
  "job_id": "aef6a470-fb63-4d5b-b644-12ead7e019b3"
}
```

Status Code

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

Error Code

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

4.11.4 Querying Concurrency Control Rules of SQL Statements

Function

This API is used to query concurrency control rules of SQL statements. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/instances/{instance_id}/sql-filter/rules

Table 4-459 URI parameters

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

Table 4-460 Query parameters

Parameter	Mandatory	Type	Description
node_id	Yes	String	Node ID.
sql_type	No	String	SQL statement type. The value is case-insensitive. If this parameter is not specified, concurrency control rules of all types of statements are queried. Value: <ul style="list-style-type: none">• SELECT• UPDATE• DELETE

Request Parameters

Table 4-461 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-462 Response body parameters

Parameter	Type	Description
node_id	String	Node ID.
sql_filter_rules	Array of SqlFilterRule objects	Concurrency control rules of SQL statements.

Table 4-463 SqlFilterRule

Parameter	Type	Description
sql_type	String	SQL statement type. Value: <ul style="list-style-type: none">• SELECT• UPDATE• DELETE
patterns	Array of SqlFilterRulePattern objects	Concurrency control rules of SQL statements.

Table 4-464 SqlFilterRulePattern

Parameter	Type	Description
pattern	String	A concurrency control rule of SQL statements.
max_concurrency	Integer	Maximum number of concurrent SQL statements.

Status code: 400**Table 4-465** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-466** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Querying concurrency control rules of SQL statements

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instance/af315b8e6aaa41799bd9a31f2de15abcin07/sql-filter/rules?node_id=c01a5645eb2c4fb6a9373542f5366e50no07
```

Example Response**Status code: 200**

Success.

```
{
  "node_id": "c01a5645eb2c4fb6a9373542f5366e50no07",
  "sql_filter_rules": [ {
    "sql_type": "SELECT",
    "patterns": [ {
      "pattern": "select~from~t1",
      "max_concurrency": 0
    }, {
      "pattern": "select~from~t2~where~id",
      "max_concurrency": 10
    } ]
  }, {
    "sql_type": "UDPATE",
    "patterns": [ {
      "pattern": "update~t1",
      "max_concurrency": 0
    }, {
      "pattern": "update~t2~where~id",
      "max_concurrency": 10
    } ]
  }, {
    "sql_type": "DELETE",
    "patterns": [ {
      "pattern": "delete~from",
```

```
"max_concurrency" : 0
  } ]
} ]
}
```

Status Code

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

Error Code

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

4.11.5 Deleting Concurrency Control Rules of SQL Statements

Function

This API is used to delete concurrency control rules of SQL statements. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

DELETE /v3/{project_id}/instances/{instance_id}/sql-filter/rules

Table 4-467 URI parameters

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

Request Parameters

Table 4-468 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-469 Request body parameter

Parameter	Mandatory	Type	Description
sql_filter_rules	Yes	Array of DeleteNodeSqlFilterRuleInfo objects	Concurrency control rules of SQL statements for nodes.

Table 4-470 DeleteNodeSqlFilterRuleInfo

Parameter	Mandatory	Type	Description
node_id	Yes	String	Node ID.
rules	Yes	Array of DeleteNodeSqlFilterRuleInfo objects	Concurrency control rules of SQL statements.

Table 4-471 DeleteNodeSqlFilterRule

Parameter	Mandatory	Type	Description
sql_type	Yes	String	SQL statement type. Value: <ul style="list-style-type: none">• SELECT• UPDATE• DELETE
patterns	Yes	Array of strings	Concurrency control rules of SQL statements.

Response Parameters

Status code: 200

Table 4-472 Response body parameters

Parameter	Type	Description
job_id	String	ID of the task for deleting concurrency control rules of SQL statements.

Status code: 400

Table 4-473 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-474 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Deleting concurrency control rules of SQL statements (SQL statement types include SELECT, UPDATE, and DELETE.)

```
DELETE https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/instance/af315b8e6aaa41799bd9a31f2de15abcin07/sql-filter/rules
{
  "sql_filter_rules": [ {
    "node_id": "c01a5645eb2c4fb6a9373542f5366e50no07",
    "rules": [ { {
      "sql_type": "SELECT",
      "patterns": [ "select~from~t1", "select~from~t2" ]
    }, {
      "sql_type": "UPDATE",
      "patterns": [ "udpate~t3~where~id" ]
    } ]
  }, {
    "node_id": "b234a5645eb2c4ji3b9372342f5362397no07",
    "rules": [ { {
      "sql_type": "SELECT",
      "patterns": [ "select~from~t1", "select~from~t2" ]
    }, {
      "sql_type": "DELETE",
      "patterns": [ "delete~t3~where~id" ]
    } ]
  } ]
}
```

Example Response

Status code: 200

Success.

```
{
  "job_id": "aef6a470-fb63-4d5b-b644-12ead7e019b3"
}
```

Status Code

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

Error Code

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

4.12 Task Center

4.12.1 Obtaining Information About a Task with a Specified ID

Function

This API is used to obtain task information from the task center. Before calling this API:

- Learn how to [authorize and authenticate](#) it.

- Obtain the required [region and endpoint](#).

Constraints

- This API is used to query asynchronous tasks of the last one month in the task center.
- After a job is generated, it takes several seconds to query the job ID.

URI

GET /v3/{project_id}/jobs

Table 4-475 URI parameters

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

Table 4-476 Query parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Task ID.

Request Parameters

Table 4-477 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.

Parameter	Mandatory	Type	Description
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-478 Response body parameters

Parameter	Type	Description
job	GetJobInfoDetail object	Task information.

Table 4-479 GetJobInfoDetail

Parameter	Type	Description
id	String	Task ID.
name	String	Task name.
status	String	Task execution status. Value: <ul style="list-style-type: none">• Running: The task is being executed.• Completed: The task is successfully executed.• Failed: The task failed to be executed.
created	String	Creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.

Parameter	Type	Description
ended	String	End time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
process	String	Task execution progress. The execution progress (such as 60%) is displayed only when the task is being executed. Otherwise, "" is returned.
instance	GetJobInstanceInfoDetail object	Instance information of the task with the specified ID.
entities	Object	Displayed information varies depending on tasks.
fail_reason	String	Task failure information.

Table 4-480 GetJobInstanceInfoDetail

Parameter	Type	Description
id	String	Instance ID.
name	String	Instance name.

Status code: 400**Table 4-481** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-482 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Obtaining information about a task with a specified ID

```
GET https://{endpoint}/v3/054e292c9880d4992f02c0196d3ea468/jobs?id=a9767ede-fe0f-4888-9003-e843a4c90514
```

Example Response

Status code: 200

NOTE

In the response example, some tasks in the task center are used as examples.

Success.

```
{
  "job" : {
    "id" : "31b8ae23-c687-4d80-b7b4-42a66c9bb886",
    "name" : "CreateGaussDBforMySQLInstance",
    "status" : "Completed",
    "created" : "2018-08-06T10:41:14+0800",
    "ended" : "2018-08-06T16:41:14+0000",
    "process" : "",
    "instance" : {
      "id" : "a48e43ff268f4c0e879652d65e63d0fbin07",
      "name" : "DO-NOT-TOUCH-mgr2-mysql-single"
    },
    "entities" : {
      "instance" : {
        "endpoint" : "192.168.1.203:3306",
        "type" : "Cluster",
        "datastore" : {
          "type" : "gaussdb-mysql",
          "version" : "8.0"
        }
      },
      "resource_ids" : [ "a48e43ff268f4c0e879652d65e63d0fbin07.vm",
"a48e43ff268f4c0e879652d65e63d0fbin07.volume" ]
    }
  }
}
```

Status Code

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

Error Code

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

4.12.2 Obtaining Instant Tasks

Function

This API is used to obtain the instant tasks. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /v3/{project_id}/immediate-jobs

Table 4-483 URI parameters

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

Table 4-484 Query parameters

Parameter	Mandatory	Type	Description
status	No	String	Task execution status. Value: <ul style="list-style-type: none">• Running: The task is being executed.• Completed: The task is successfully executed.• Failed: The task failed to be executed.• Pending: The task is not executed.

Parameter	Mandatory	Type	Description
job_name	No	String	<p>Task name. Value: Value:</p> <ul style="list-style-type: none"> • CreateGaussDBforMySQL-Instance: Creating a DB instance • RestoreGaussDBforMySQLNewInstance: Restoring data to a new DB instance • AddGaussDBforMySQLNodes: Adding a node • DeleteGaussDBforMySQLNode: Deleting a node • RebootGaussDBforMySQLInstance: Rebooting a DB instance • ModifyGaussDBforMySQLPort: Changing a database port • ModifyGaussDBforMySQLSecurityGroup: Changing a security group • ResizeGaussDBforMySQLFlavor: Changing instance specifications • SwitchoverGaussDBforMySQLMasterNode: Promoting a read replica to the primary node • GaussDBforMySQLBindEIP: Binding an EIP • GaussDBforMySQLUnbindEIP: Unbinding an EIP • RenameGaussDBforMySQLInstance: Changing a DB instance name • DeleteGaussDBforMySQLInstance: Deleting a DB instance • UpgradeGaussDBforMySQLDatabaseVersion: Upgrading version • EnlargeGaussDBforMySQLProxy: Adding nodes for a proxy instance

Parameter	Mandatory	Type	Description
			<ul style="list-style-type: none"> • OpenGaussDBforMySQL-Proxy: Creating a proxy instance • CloseGaussDBforMySQL-Proxy: Deleting a proxy instance • GaussdbforMySQLModify-ProxyIp: Changing the IP address of a proxy instance • ScaleGaussDBforMySQL-Proxy: Changing the node specifications of a proxy instance • GaussDBforMySQLModifyInstanceMetricExtend: Enabling or disabling Monitoring by Seconds • GaussDBforMySQLModifyInstanceDataVip: Changing the private IP address • GaussDBforMySQLSwitchSSL: Enabling or disabling SSL • GaussDBforMySQLModify-ProxyConsist: Changing the proxy consistency • GaussDBforMySQLModify-ProxyWeight: Changing the read weights of nodes
job_id	No	String	Task ID.
offset	No	String	Index offset. The query starts from the first piece of data. The default value is 1 . The value must be a number and cannot be a negative number.
limit	No	String	Number of records to be queried. Value: 10 (default value), 20 , or 50 .

Parameter	Mandatory	Type	Description
start_time	No	String	Start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100 .
end_time	No	String	End time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100 .

Request Parameters

Table 4-485 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-486 Response body parameters

Parameter	Type	Description
jobs	Array of TaskDetailInfo objects	Task details.
total_count	Integer	Total number of tasks.

Table 4-487 TaskDetailInfo

Parameter	Type	Description
instance_id	String	Instance ID.
instance_name	String	Instance name.
instance_status	String	Instance status. Value: <ul style="list-style-type: none">● createfail: The DB instance fails to be created.● creating: The DB instance is being created.● normal: The DB instance is normal.● abnormal: The DB instance is abnormal.● deleted: The DB instance has been deleted.
job_id	String	Task ID.
order_id	String	Order ID.

Parameter	Type	Description
job_name	String	<p>Task name.</p> <p>Value:</p> <ul style="list-style-type: none"> ● CreateGaussDBforMySQLInstance: Creating a DB instance ● RestoreGaussDBforMySQLNewInstance: Restoring data to a new DB instance ● AddGaussDBforMySQLNodes: Adding a node ● DeleteGaussDBforMySQLNode: Deleting a node ● RebootGaussDBforMySQLInstance: Rebooting a DB instance ● ModifyGaussDBforMySQLPort: Changing a database port ● ModifyGaussDBforMySQLSecurityGroup: Changing a security group ● ResizeGaussDBforMySQLFlavor: Changing instance specifications ● SwitchoverGaussDBforMySQLMaster-Node: Promoting a read replica to the primary node ● GaussDBforMySQLBindEIP: Binding an EIP ● GaussDBforMySQLUnbindEIP: Unbinding an EIP ● RenameGaussDBforMySQLInstance: Changing a DB instance name ● DeleteGaussDBforMySQLInstance: Deleting a DB instance ● UpgradeGaussDBforMySQLDatabaseVersion: Upgrading version ● EnlargeGaussDBforMySQLProxy: Adding nodes for a proxy instance ● OpenGaussDBforMySQLProxy: Creating a proxy instance ● CloseGaussDBforMySQLProxy: Deleting a proxy instance ● GaussdbforMySQLModifyProxyIp: Changing the IP address of a proxy instance ● ScaleGaussDBforMySQLProxy: Changing the node specifications of a proxy instance ● GaussDBforMySQLModifyInstanceMetricExtend: Enabling or disabling Monitoring by Seconds

Parameter	Type	Description
		<ul style="list-style-type: none"> • GaussDBforMySQLModifyInstanceData-Vip: Changing the private IP address • GaussDBforMySQLSwitchSSL: Enabling or disabling SSL • GaussDBforMySQLModifyProxyConsist: Changing the proxy consistency • GaussDBforMySQLModifyProxyWeight: Changing the read weights of nodes
status	String	Task execution status. Value: <ul style="list-style-type: none"> • Running: The task is being executed. • Completed: The task is successfully executed. • Failed: The task failed to be executed. • Pending: The task is delayed and is not executed.
process	String	Task progress.
created_time	String	Task creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100 .
ended_time	String	Task end time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100 .
fail_reason	String	Task failure cause.

Status code: 400**Table 4-488** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-489 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Obtaining the instant tasks

```
GET https://{endpoint}/v3/619d3e78f61b4be68bc5aa0b59edcf7b/immediate-jobs
```

Example Response

Status code: 200

Success.

```
{
  "jobs": [ {
    "instance_id": "ede953923f06448d9be8686ef0c1378ein07",
    "instance_name": "gauss-1234",
    "instance_status": "deleted",
    "job_id": "7155730b-a60b-4dc0-9f89-3f55897f29d6",
    "order_id": "",
    "job_name": "CloseGaussDBforMySQLProxy",
    "status": "Completed",
    "process": "",
    "created_time": "2018-08-06T10:41:14+0000",
    "ended_time": "2018-08-06T12:41:14+0000",
    "fail_reason": "Single task exception."
  } ],
  "total_count": 1
}
```

Status Code

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

Error Code

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

4.12.3 Obtaining Scheduled Tasks

Function

This API is used to obtain the scheduled tasks. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

```
GET /v3/{project_id}/scheduled-jobs
```

Table 4-490 URI parameters

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

Table 4-491 Query parameters

Parameter	Mandatory	Type	Description
offset	No	String	Index offset. The query starts from the first piece of data. The default value is 0 . The value must be a number and cannot be a negative number.
limit	No	String	Number of records to be queried. The default value is 10 .
status	No	String	Task execution status. Value: <ul style="list-style-type: none"> • Running: The task is being executed. • Completed: The task is successfully executed. • Failed: The task failed to be executed. • Pending: The task is not executed.
start_time	No	String	Start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100 . NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.

Parameter	Mandatory	Type	Description
end_time	No	String	End time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100 . NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
job_id	No	String	Task ID.
job_name	No	String	Task scheduling type.

Request Parameters

Table 4-492 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 200

Table 4-493 Response body parameters

Parameter	Type	Description
schedules	Array of ScheduleTask objects	Task details.
total_count	Integer	Total number of records.

Table 4-494 ScheduleTask

Parameter	Type	Description
job_id	String	Task ID.
instance_id	String	Instance ID.
instance_name	String	Instance name.
instance_statuses	String	Instance status. Value: <ul style="list-style-type: none">● createfail: The DB instance fails to be created.● creating: The DB instance is being created.● normal: The DB instance is normal.● abnormal: The DB instance is abnormal.● deleted: The DB instance has been deleted.
project_id	String	Project ID of a tenant in a region.

Parameter	Type	Description
job_name	String	<p>Task name.</p> <p>Value:</p> <ul style="list-style-type: none">● CreateGaussDBforMySQLInstance: Creating a DB instance● RestoreGaussDBforMySQLNewInstance: Restoring data to a new DB instance● AddGaussDBforMySQLNodes: Adding a node● DeleteGaussDBforMySQLNode: Deleting a node● RebootGaussDBforMySQLInstance: Rebooting a DB instance● ModifyGaussDBforMySQLPort: Changing a database port● ModifyGaussDBforMySQLSecurityGroup: Changing a security group● ResizeGaussDBforMySQLFlavor: Changing instance specifications● SwitchoverGaussDBforMySQLMaster-Node: Promoting a read replica to the primary node● GaussDBforMySQLBindEIP: Binding an EIP● GaussDBforMySQLUnbindEIP: Unbinding an EIP● RenameGaussDBforMySQLInstance: Changing a DB instance name● DeleteGaussDBforMySQLInstance: Deleting a DB instance● UpgradeGaussDBforMySQLDatabaseVersion: Upgrading version● EnlargeGaussDBforMySQLProxy: Adding nodes for a proxy instance● OpenGaussDBforMySQLProxy: Creating a proxy instance● CloseGaussDBforMySQLProxy: Deleting a proxy instance● GaussdbforMySQLModifyProxyIp: Changing the IP address of a proxy instance● ScaleGaussDBforMySQLProxy: Changing the node specifications of a proxy instance● GaussDBforMySQLModifyInstanceMetricExtend: Enabling or disabling Monitoring by Seconds

Parameter	Type	Description
		<ul style="list-style-type: none">● GaussDBforMySQLModifyInstanceData-Vip: Changing the private IP address● GaussDBforMySQLSwitchSSL: Enabling or disabling SSL● GaussDBforMySQLModifyProxyConsist: Changing the proxy consistency● GaussDBforMySQLModifyProxyWeight: Changing the read weights of nodes
create_time	String	Task creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100 . NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
start_time	String	Task start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100 . NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
end_time	String	Task end time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, if the time zone offset is one hour, the value of Z is +0100 . NOTE The value is empty when the DB instance is being created. After the DB instance is created, the value is not empty.
job_status	String	Task execution status. Value: <ul style="list-style-type: none">● Pending: The task is delayed and is not executed.● Running: The task is being executed.● Completed: The task is successfully executed.● Failed: The task failed to be executed.

Parameter	Type	Description
datastore_type	String	Database type.
target_config	Object	Instance configuration information, such as specifications.

Status code: 400

Table 4-495 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 4-496 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Obtaining scheduled tasks

```
GET https://{endpoint}/v3/619d3e78f61b4be68bc5aa0b59edcf7b/scheduled-jobs?offset=1&limit=10
```

Example Response

Status code: 200

Success.

```
{
  "schedules": [ {
    "job_id": "56d3c1138dcf4f1da73b0170700c78d0",
    "instance_id": "79bc540dd4d6432784894a981dfacfcin07",
    "instance_name": "gauss-f821",
    "instance_status": "BUILD",
    "project_id": "053f533ead80d5102f0cc012e8d468a4",
    "job_name": "UpgradeGaussDBforMySQLDatabaseVersion",
    "create_time": "2018-08-06T10:41:14+0000",
    "start_time": "2018-08-06T10:41:14+0000",
    "end_time": "2018-08-06T10:41:14+0000",
    "job_status": "Completed",
    "datastore_type": "gaussdb-mysql",
```

```
"target_config" : {  
  "flavor" : "gaussdb.mysql.xlarge.arm.4",  
  "mem" : "16",  
  "cpu" : "4"  
}  
}],  
"total_count" : 1  
}
```

Status Code

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

Error Code

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

4.12.4 Canceling a Scheduled Task

Function

This API is used to cancel a scheduled task. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

DELETE /v3/{project_id}/scheduled-jobs

Table 4-497 URI parameters

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

Request Parameters

Table 4-498 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Table 4-499 Request body parameter

Parameter	Mandatory	Type	Description
job_ids	Yes	Array of strings	Task ID.

Response Parameters

Status code: 200

Table 4-500 Response body parameters

Parameter	Type	Description
job_ids	Array of strings	Task ID for canceling a scheduled task.

Status code: 400

Table 4-501 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500**Table 4-502** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Canceling a scheduled task

```
DELETE https://{endpoint}/v3/619d3e78f61b4be68bc5aa0b59edcf7b/scheduled-jobs
{
  "job_ids" : [ "56d3c1138dcf4f1da73b0170700c78d0" ]
}
```

Example Response

Status code: 200

Success.

```
{
  "job_ids" : [ "56d3c1138dcf4f1da73b0170700c78d0" ]
}
```

Status Code

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

Error Code

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

4.12.5 Deleting a Task Record

Function

This API is used to delete the record of a specific task. Before calling this API:

- Learn how to [authorize and authenticate](#) it.

- Obtain the required **region and endpoint**.

URI

DELETE /v3/{project_id}/jobs/{job_id}

Table 4-503 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
job_id	Yes	String	Task ID.

Request Parameters

Table 4-504 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. If the following response body is returned for calling the API used to obtain a user token , the request is successful. After the request is processed, the value of X-Subject-Token in the message header is the token value.
X-Language	No	String	Request language type. The default value is en-us . Value: <ul style="list-style-type: none">• en-us• zh-cn

Response Parameters

Status code: 400

Table 4-505 Response body parameters

Parameter	Type	Description
error_code	String	Error code.

Parameter	Type	Description
error_msg	String	Error message.

Status code: 500

Table 4-506 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

Deleting a specified task record

```
DELETE https://{endpoint}/v3/619d3e78f61b4be68bc5aa0b59edcf7b/jobs/6b00c41d-  
d54f-4bcb-80da-566cccdc2b5d
```

Example Response

Status code: 200

Success.

```
{ }
```

Status Code

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

Error Code

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

5 APIs (Unavailable Soon)

5.1 DB Engine Version Queries

5.1.1 Querying Version Information About a DB Engine

Function

This API is used to query the version information of a specified DB engine. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
GET https://{endpoint}/mysql/v3/{project_id}/datastores/{database_name}
- Example
GET https://{endpoint}/mysql/v3/619d3e78f61b4be68bc5aa0b59edcf7b/datastores/gaussdb-mysql
- Parameter description

Table 5-1 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
database_name	Yes	DB engine. The following DB engine is supported (case-insensitive): gaussdb-mysql

Request

None.

Response

- Normal response

Table 5-2 Parameter description

Name	Type	Description
datastores	Array of objects	DB versions. For details, see Table 5-3 .

Table 5-3 datastores field data structure description

Name	Type	Description
id	String	DB version ID. Its value is unique.
name	String	DB version number. Only the major version number with two digits is returned.

- Example normal response

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

Status Code

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

Error Code

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

5.2 Database Specification Queries

5.2.1 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 [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
GET https://{endpoint}/mysql/v3/{project_id}/flavors/{database_name}?
version_name={version_name}&spec_code={spec_code}&availability_zone_mode={availability_zone_mode}
- Example
GET https://{endpoint}/mysql/v3/0483b6b16e954cb88930a360d2c4e663/
flavors/gaussdb-mysql?
version_name=8.0&spec_code=gaussdb.mysql.xlarge.x86.4&availability_zone_mode=single
- Parameter description

Table 5-4 Parameter description

Name	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
database_name	Yes	String	DB engine. Its value is case-insensitive and can be: gaussdb-mysql
version_name	No	String	DB version number. To obtain this value, see Querying Version Information About a DB Engine . Currently, only MySQL 8.0 is supported.
availability_zone_mode	Yes	String	AZ mode. Its value can be single or multi and is case-insensitive.
spec_code	No	String	Specification code.

Request

None.

Response

- Normal response

Table 5-5 Parameter description

Name	Type	Description
flavors	Array of objects	DB instance specification list. For details, see Table 5-6 .

Table 5-6 flavors field data structure description

Name	Type	Description
vcpus	String	Number of vCPUs. For example, the value 1 indicates 1 vCPU.
ram	String	Memory size in GB.
type	String	Specification type. The value can be arm .
id	String	Specification ID. The value must be unique.
spec_code	String	Resource specification code. Its value is same as the value of flavor_ref .
version_name	String	DB version number.
instance_mode	String	DB instance type. Currently, only the cluster type is supported.
az_status	Map<String, String>	Status of the AZ where the specification belongs. Its value can be any of the following: <ul style="list-style-type: none"> ● normal: on sale. ● unsupported: not supported ● sellout: sold out

- Example normal response

```
{
  "flavors":[
    {
      "vcpus":"1",
      "ram":"4",
      "type":"x86",
      "id":"3169caaf-6c2f-41d5-aadd-c8fc3d83597e",
      "spec_code":"gaussdb.xlarge.x86.4",
      "instance_mode":"Cluster",
      "version_name": "8.0",
      "az_status":{
        "az1":"normal",
        "az2":"normal"
      }
    },
    {
      "vcpus":"2",
      "ram":"4",
      "type":"arm"
    }
  ]
}
```

```
{
  "id": "cefb8fab-c9f7-482f-a97c-e8a0c8abe35b",
  "spec_code": "gaussdb.mysql.xlarge.x86.2",
  "instance_mode": "Cluster",
  "version_name": "8.0",
  "az_status": {
    "az1": "normal",
    "az2": "normal"
  }
}
```

Status Code

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

Error Code

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

5.3 Instance Management

5.3.1 Creating a DB Instance

Function

This API is used to create a GaussDB(for MySQL) instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
POST https://{endpoint}/mysql/v3/{project_id}/instances
- Example
POST https://{endpoint}/mysql/v3/0483b6b16e954cb88930a360d2c4e663/
instances
- Parameter description

Table 5-7 Parameter description

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

Request

Table 5-8 Parameter description

Name	Mandatory	Type	Description
charge_info	No	Object	Billing mode, which is yearly/monthly or pay-per-use (default setting). For details, see Table 5-9 . Note: You cannot create yearly/monthly instances in a DeC.
name	Yes	String	DB instance name. Instances of the same type can have same names under the same tenant. The value consists of 4 to 64 characters and starts with a letter. It is case-sensitive and contains only letters, digits, hyphens (-), and underscores (_).
datastore	Yes	Object	Database information. For details, see Table 5-10 .
mode	Yes	String	DB instance type, which is case-insensitive. Currently, only the cluster type is supported.
flavor_ref	Yes	String	Specification code. For details, see Table 5-6 .
vpc_id	Yes	String	VPC ID. To obtain this value, use either of the following methods: <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 "Querying VPCs" in the <i>Virtual Private Cloud API Reference</i>.
subnet_id	Yes	String	Network ID. To obtain this value, use either of the following methods: <ul style="list-style-type: none">Method 1: Log in to the VPC console and click the target subnet on the Subnets page. You can view the network ID on the displayed page.Method 2: See "Querying Subnets" in the <i>Virtual Private Cloud API Reference</i>.

Name	Mandatory	Type	Description
security_group_id	No	String	<p>Security group ID.</p> <p>If network ACL is enabled, this parameter cannot be specified. If network ACL is disabled, this parameter is mandatory.</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 "Querying Security Groups" in the <i>Virtual Private Cloud API Reference</i>.
configuration_id	No	String	Parameter template ID.
password	Yes	String	<p>Database password.</p> <p>Valid value:</p> <p>The password consists of 8 to 32 characters and contains at least three types of the following: uppercase letters, lowercase letters, digits, and special characters (~!@#%^*_-=+?).</p> <p>You are advised to enter a strong password to improve security and prevent security risks such as brute force cracking. If you enter a weak password, the system automatically determines that the password is invalid.</p>
backup_strategy	No	Object	<p>Automated backup policy.</p> <p>For details, see Table 5-11.</p>
time_zone	No	String	<p>UTC time zone.</p> <ul style="list-style-type: none"> If this parameter is not specified, UTC is used by default. If this parameter is specified, the value ranges from UTC-12:00 to UTC+12:00 at the full hour. For example, the parameter can be UTC+08:00 rather than UTC+08:30.
availability_zone_mode	Yes	String	AZ type. It can be single or multi .

Name	Mandatory	Type	Description
master_availability_zone	If availability_zone_mode is set to multi , this parameter is mandatory. If availability_zone_mode is set to single , this parameter cannot be specified.	String	Primary AZ.
slave_count	Yes	Integer	Number of read replicas. The value is from 1 to 9. An instance contains up to 15 read replicas.
region	Yes	String	Region ID. The value cannot be empty. Obtain the parameter value from the enterprise administrator.
volume	No	Object	Volume information. This parameter is optional during the creation of yearly/monthly instances. For details, see Table 5-12 .
enterprise_project_id	No	String	Enterprise project ID. This parameter is mandatory when the enterprise project is enabled, and cannot be specified when the enterprise project is disabled.

Name	Mandatory	Type	Description
lower_case_table_names	No	Integer	Whether a kernel table name is case-sensitive. If the value is 1 (by default), the table name is case-insensitive. If the value is 0 , the table name is case-sensitive.
tags	No	Array of objects	<p>Tag list. 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>To create instances with multiple tag keys and values, separate key-value pairs with commas (.). Up to 20 key-value pairs can be added.</p> <p>For details, see Table 5-13.</p>

Table 5-9 charge_info field data structure description

Name	Mandatory	Type	Description
charge_mode	Yes	String	<p>Billing mode.</p> <p>Valid value:</p> <ul style="list-style-type: none"> • prePaid: indicates the yearly/monthly billing mode. • postPaid: indicates the pay-per-use billing mode.

Table 5-10 datastore field data structure description

Name	Mandatory	Type	Description
type	Yes	String	DB engine. Currently, only gaussdb-mysql is supported.

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

Table 5-11 backup_strategy field data structure description

Name	Mandatory	Type	Description
start_time	Yes	String	Automated backup start time. The automated backup will be triggered within one hour after the time specified by this parameter. 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. <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 00. Example value: <ul style="list-style-type: none"> 21:00-22:00

Table 5-12 volume field data structure description

Name	Mandatory	Type	Description
size	Yes	Integer	Disk size. The default value is 40 GB . The value ranges from 40 GB to 128,000 GB and must be a multiple of 10.

Table 5-13 tags field data structure description

Name	Mandatory	Type	Description
key	Yes	String	Tag key. It contains a maximum of 36 Unicode characters. The value cannot be an empty string, a space, or left blank. Only uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_) are allowed.
value	Yes	String	Tag value. It contains a maximum of 43 Unicode characters. It can be an empty string. Only uppercase letters, lowercase letters, digits, periods (.), hyphens (-), and underscores (_) are allowed.

NOTE

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

• Request example

```
{
  "charge_info":{
    "charge_mode":"postPaid"
  },
  "region":"xxx",
  "name":"gaussdb-2d34",
  "datastore":{
    "type":"gaussdb-mysql",
    "version":"8.0"
  },
  "mode":"Cluster",
  "flavor_ref":"gaussdb.mysql.large.x86.4",
  "vpc_id":"f7ee62e2-9705-4523-ba49-a85ea1a1fa87",
  "subnet_id":"140af7bf-a9da-4dcf-8837-34199fd6d186",
  "security_group_id":"c7f69884-fe2b-4630-8114-70a11499d902",
  "configuration_id":"43570e0de32e40c5a15f831aa5ce4176pr07",
  "password":"xxxx",
  "backup_strategy":{
    "start_time":"17:00-18:00"
  },
  "time_zone":"UTC+08:00",
  "availability_zone_mode":"multi",
  "master_availability_zone":"az1pod1",
  "slave_count":1,
  "enterprise_project_id":"0",
  "lower_case_table_names":1
}
```

Response

- Normal response

Table 5-14 Parameter description

Name	Type	Description
instance	Object	Instance information. For details, see Table 5-15 .
job_id	String	DB instance creation task ID. This parameter is returned only when pay-per-use DB instances are created.
order_id	String	Order ID. This parameter is returned only when yearly/monthly instances are created.

Table 5-15 instance field data structure description

Name	Type	Description
id	String	DB instance ID.
name	String	DB instance name. Instances of the same type can have same names under the same tenant. The value consists of 4 to 64 characters and starts with a letter. It is case-insensitive and contains only letters, digits, hyphens (-), and underscores (_).
status	String	DB instance status. This parameter is returned only when pay-per-use DB instances are created.
datastore	Object	Database information. For details, see Table 5-16 .
mode	String	DB instance type. Currently, only the cluster type is supported.
configuration_id	String	Parameter template ID.
port	String	Database port, which is the same as the request parameter.
backup_strategy	Object	Automated backup policy. For details, see Table 5-17 .

Name	Type	Description
enterprise_project_id	String	Enterprise project ID, which is the same as the request parameter.
region	String	Region ID, which is the same as the request parameter.
availability_zone_mode	String	AZ type, which is the same as the request parameter.
master_availability_zone	String	Primary AZ ID.
vpc_id	String	VPC ID, which is the same as the request parameter.
security_group_id	String	Security group ID, which is the same as the request parameter.
subnet_id	String	Subnet ID, which is the same as the request parameter.
flavor_ref	String	Specification code, which is the same as the request parameter. For details, see Table 5-6 .
charge_info	Object	Billing mode, which is yearly/monthly or pay-per-use. For details, see Table 5-18 .

Table 5-16 datastore field data structure description

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

Table 5-17 backup_strategy field data structure description

Name	Type	Description
start_time	String	Backup time window. Automated backups will be triggered during the backup time window.
keep_days	Integer	Backup retention days.

Table 5-18 charge_info field data structure description

Name	Type	Description
charge_mode	String	Billing mode.
period_num	Integer	Subscription duration, which is calculated by month. This parameter is valid when charge_mode is set to prePaid (this parameter is valid only for yearly/monthly instances).

NOTE

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

- Example normal response

```
{
  "instance":{
    "id":"5eebbb4c0f9f4a99b42ed1b6334569aaain07",
    "name":"gaussdb-2d34",
    "status":"BUILD",
    "datastore":{
      "type":"gaussdb-mysql",
      "version":"8.0"
    },
    "mode":"Cluster",
    "configuration_id": "",
    "port":null,
    "backup_strategy":{
      "start_time":null,
      "keep_days":"7"
    },
    "enterprise_project_id": "0",
    "region":"aaa",
    "availability_zone_mode":"multi",
    "master_availability_zone":"aaa",
    "vpc_id":"f7ee62e2-9705-4523-ba49-a85ea1a1fa87",
    "security_group_id":"c7f69884-fe2b-4630-8114-70a11499d902",
    "subnet_id":"140af7bf-a9da-4dcf-8837-34199fd6d186"
    "charge_info":{
      "charge_mode":"postPaid"
    },
    "flavor_ref":"gaussdb.mysql.large.x86.4"
  },
  "job_id":"43672fe5-56bd-47f1-8fd1-595cded08a7c"
}
```

Status Code

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

Error Code

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

5.3.2 Querying DB Instances

Function

This API is used to query instances according to search criteria. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format

GET https://{endpoint}/mysql/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}

- Example

GET https://{endpoint}/mysql/v3/97b026aa9cc4417888c14c84a1ad9860/instances?

id=ed7cc6166ec24360a5ed5c5c9c2ed726in01&name=hy&type=Cluster&datastore_type=gaussdb-mysql&vpc_id=19e5d45d-70fd-4a91-87e9-b27e71c9891f&subnet_id=bd51fb45-2dcb-4296-8783-8623bfe89bb7&offset=0&limit=10

- Parameter description

Table 5-19 Parameter description

Name	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
id	String	No	DB instance ID. The asterisk (*) is reserved for the system. If the instance ID starts with an asterisk (*), the value following asterisk (*) is used for fuzzy matching. Otherwise, the instance ID is used for exact matching.
name	String	No	DB instance name. The asterisk (*) is reserved for the system. If the instance name starts with an asterisk (*), the value following asterisk (*) is used for fuzzy matching. Otherwise, the instance name is used for exact matching.
type	String	No	DB instance type to be queried. Currently, only the cluster type is supported.

Name	Type	Mandatory	Description
datastore_type	String	No	DB type. Currently, only gaussdb-mysql is supported.
vpc_id	String	No	VPC ID. <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 "Querying VPCs" in the <i>Virtual Private Cloud API Reference</i>.
subnet_id	String	No	Network ID of the subnet. <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 "Querying Subnets" in the <i>Virtual Private Cloud API Reference</i>.
offset	Integer	No	Index offset. If offset is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number.
limit	Integer	No	Number of records to be queried. The default value is 100 . The value must be a positive integer. The minimum value is 1 and the maximum value is 100 .

Request

None.

Response

- Normal response

Table 5-20 Parameter description

Name	Type	Description
instances	Array of objects	Instance information. For details, see Table 5-21 .
total_count	Integer	Total number of records.

Table 5-21 instances field data structure description

Name	Type	Description
id	String	DB instance ID.
name	String	DB instance name.
status	String	DB instance status.
private_ips	List<String>	Private IP address for write. It is a blank string until an ECS is created.
public_ips	List<String>	Public IP addresses.
port	String	Database port.
type	String	DB instance type. The value is Cluster .
region	String	Region where the DB instance is deployed.
datastore	Object	Database information. For details, see Table 5-22 .
created	String	Creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 . The value is empty unless the instance creation is complete.
updated	String	Update time. The format is the same as that of the created field. The value is empty unless the instance creation is complete.
db_user_name	String	Default username.
vpc_id	String	VPC ID.
subnet_id	String	Network ID of the subnet.
security_group_id	String	Security group ID.
flavor_ref	String	Specification code. For details, see Table 5-6 .
flavor_info	Object	Specification description.

Name	Type	Description
volume	Object	Volume information. For details, see Table 5-23 .
backup_strategy	Object	Backup policy. For details, see Table 5-25 .
enterprise_project_id	String	Enterprise project ID.
time_zone	String	Time zone.
charge_info	Object	Billing mode, which is yearly/monthly or pay-per-use. By default, pay-per-use is used. For details, see Table 5-26 .

Table 5-22 datastore field data structure description

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

Table 5-23 volume field data structure description

Name	Type	Description
type	String	Disk type.
size	String	Used disk size in GB.

Table 5-24 flavor_ref field data structure description

Name	Type	Description
vcpus	String	Number of vCPUs.
ram	String	Memory size in GB.

Table 5-25 backup_strategy field data structure description

Name	Type	Description
start_time	String	Backup time window. Automated backups will be triggered during the backup time window.
keep_days	String	Backup retention days.

Table 5-26 charge_info field data structure description

Name	Type	Description
charge_mode	String	Billing mode. Valid value: <ul style="list-style-type: none">● prePaid: indicates the yearly/monthly billing mode.● postPaid: indicates the pay-per-use billing mode.

 **NOTE**

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

- Example normal response

```
{
  "total_count":6,
  "instances":[
    {
      "id":"d738399de028480fabb2b8120d4e01a4in07",
      "status":"ACTIVE",
      "name":"oMoS_001",
      "port":3306,
      "type":"Cluster",
      "private_ips": ["192.168.0.142"],
      "public_ips": ["10.154.219.187"],
      "db_user_name": "root",
      "region": "aaa",
      "datastore": {"type": "gaussdb-mysql", "version":"8.0"},
      "created": "2018-08-20T02:33:49+0800",
      "updated": "2018-08-20T02:33:50+0800",
      "volume": {
        "type": "POOL",
        "used_size": 100
      },
      "vpc_id": "f7ee62e2-9705-4523-ba49-a85ea1a1fa87",
      "subnet_id": "140af7bf-a9da-4dcf-8837-34199fd6d186",
      "security_group_id":"c7f69884-fe2b-4630-8114-70a11499d902",
      "flavor_ref":"gaussdb.mysql.c3.small.4",
      "backup_strategy": {"start_time": "19:00-20:00", "keep_days": 7},
      "charge_info": {
        "charge_mode": "postPaid"
      },
    },
  ],
  "enterprise_project_id": "0",
}
```

```
    "time_zone": "",  
  }  
]  
}
```

Status Code

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

Error Code

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

5.3.3 Deleting a DB Instance

Function

This API is used to delete a DB instance.

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
DELETE https://{endpoint}/mysql/v3/{project_id}/instances/{instance_id}
- Example
DELETE https://{endpoint}/mysql/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfsdae3435in01
- Parameter description

Table 5-27 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	Yes	Instance ID, which is compliant with the UUID format.

Request

None

Response

- Normal response

Table 5-28 Parameter description

Name	Type	Description
job_id	String	ID of the task for deleting a DB instance.

- Example normal response

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

Status Code

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

Error Code

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

5.3.4 Querying Details of a DB Instance

Function

This API is used to query the details of a specified DB instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
GET https://{endpoint}/mysql/v3/{project_id}/instances/{instance_id}
- Example
GET https://{endpoint}/mysql/v3/97b026aa9cc4417888c14c84a1ad9860/instances/436aaafb689c4250a9a5bb33cb271e8cin07
- Parameter description

Table 5-29 Parameter description

Name	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .

Name	Type	Mandatory	Description
instance_id	String	Yes	DB instance ID.

Request

None.

Response

- Normal response

Table 5-30 Parameter description

Name	Type	Description
instance	Object	Instance information. For details, see Table 5-31 .

Table 5-31 instance field data structure description

Name	Type	Description
id	String	DB instance ID.
name	String	DB instance name.
project_id	String	Project ID of a tenant in a region.

Name	Type	Description
status	String	DB instance status. Valid value: If the value is BUILD , the DB instance is being created. If the value is ACTIVE , the DB instance is normal. If the value is FAILED , the DB instance is abnormal. If the value is FROZEN , the DB instance is frozen. If the value is MODIFYING , the DB instance is being scaled up. If the value is REBOOTING , the DB instance is being rebooted. If the value is RESTORING , the DB instance is being restored. If the value is MODIFYING INSTANCE TYPE , the DB instance is changing from primary to standby. If the value is SWITCHOVER , the primary/standby switchover is being performed. If the value is MIGRATING , the DB instance is being migrated. If the value is BACKING UP , the DB instance is being backed up. If the value is MODIFYING DATABASE PORT , the database port is being changed. If the value is STORAGE FULL , the instance storage space is full.
enterprise_project_id	String	Enterprise project ID.
type	String	DB instance type. Currently, only the cluster type is supported.
node_count	Integer	Number of nodes.
datastore	Object	Database information. For details, see Table 5-32 .
backup_used_space	Double	Used backup space in GB.

Name	Type	Description
created	String	Creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 . The value is empty unless the instance creation is complete.
updated	String	Update time. The format is the same as that of the created field. The value is empty unless the instance creation is complete.
public_ips	String	Public IP address of the instance.
private_write_ips	Array of Lists	Private IP address for write.
db_user_name	String	Default username.
port	String	Database port.
vpc_id	String	VPC ID.
subnet_id	String	Network ID of the subnet.
security_group_id	String	Security group ID.
volume	Object	Disk information. For details, see Table 5-35 .
backup_strategy	Object	Backup policy. For details, see Table 5-33 .
nodes	Arrays of object	Node information. For details, see Table 5-34 .
time_zone	String	Time zone.
az_mode	String	AZ type. It can be single or multi .
master_az_code	String	Primary AZ.
maintenance_window	String	Maintenance window in the UTC format.
configuration_id	String	ID of the parameter template used for creating an instance or ID of the latest parameter template that is applied to an instance.
tags	Arrays of object	Tags for managing instances. For details, see Table 5-36 .

Table 5-32 datastore field data structure description

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

Table 5-33 backup_strategy field data structure description

Name	Type	Description
start_time	String	Backup time window. Automated backups will be triggered during the backup time window.
keep_days	Integer	Backup retention days.

Table 5-34 nodes field data structure description

Name	Type	Description
id	String	Node ID.
name	Array of object	Node name.
type	String	Node type, which can be master or slave .
status	String	Node status.
port	Integer	Database port.
private_read_ips	Array of String	Private IP address for read.
volume	Object	Disk information.
az_code	String	AZ.
region_code	String	Region where the DB instance is deployed.
created	String	DB instance creation time.
updated	String	Update time.
flavor_ref	String	Specification code. For details, see Table 5-6 .
max_connections	String	Maximum number of connections.

Name	Type	Description
vcpus	String	Number of vCPUs.
ram	String	Memory size in GB.
need_restart	Boolean	Whether to reboot the DB instance for the modifications to take effect.
priority	String	Failover priority.

Table 5-35 volume field data structure description

Name	Type	Description
type	String	Storage type. Currently, only POOL is supported.
used	String	Used storage size in GB.

Table 5-36 tags field data structure description

Name	Type	Description
type	String	Tag key. The value can contain a maximum of 36 Unicode characters. The value cannot be an empty string, a space, or left blank. Only uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_) are allowed.
used	String	Tag value. The value contains a maximum of 43 Unicode characters and can also be an empty string. Only uppercase letters, lowercase letters, digits, periods (.), hyphens (-), and underscores (_) are allowed.

NOTE

The values of **region_code** and **az_code** are used as examples.

- Example normal response

```
{
  "instance": {
    "id": "d2cda7b97a39488e8b30e3cea4066204in07",
    "name": "gauss-d616-lb07",
    "status": "FAILED",
    "project_id": "053f533ead80d5102f0cc012e8d468a4",
    "enterprise_project_id": "0",
    "type": "Cluster",
    "charge_info": {
```

```
"charge_mode": "postPaid",
"order_id": ""
},
"node_count": 2,
"datastore": {
  "type": "GaussDB(for MySQL)",
  "version": "8.0"
},
"created": "2020-07-21T09:13:56+0800",
"updated": "2020-07-21T09:27:54+0800",
"public_ips": "",
"private_write_ips": [
  "192.168.0.235"
],
"db_user_name": "root",
"port": "3306",
"vpc_id": "f7ee62e2-9705-4523-ba49-a85ea1a1fa87",
"subnet_id": "140af7bf-a9da-4dcf-8837-34199fd6d186",
"security_group_id": "c7f69884-fe2b-4630-8114-70a11499d902",
"backup_strategy": {
  "start_time": "00:00-00:00",
  "keep_days": "0"
},
"nodes": [
  {
    "id": "799a0f2fa49a4151bf9f7063c1fba36no07",
    "name": "gauss-d616-lb07_node01",
    "type": "master",
    "status": "FAILED",
    "port": 3306,
    "private_read_ips": [
      "192.168.0.163"
    ],
    "volume": {
      "type": "POOL",
      "used": "0.0"
    },
    "az_code": "az1xahz",
    "region_code": "cn-xianhz-1",
    "flavor_id": "3169caaf-6c2f-41d5-aadd-c8fc3d83597e",
    "flavor_ref": "gaussdb.large.4",
    "max_connections": null,
    "vcpus": "1",
    "ram": "4",
    "need_restart": false,
    "priority": 1
  },
  {
    "id": "816459d771c444db9fa4c1d5c173cb1cno07",
    "name": "gauss-d616-lb07_node02",
    "type": "slave",
    "status": "FAILED",
    "port": 3306,
    "private_read_ips": [
      "192.168.0.160"
    ],
    "volume": {
      "type": "POOL",
      "used": "0.0"
    },
    "az_code": "az1xahz",
    "region_code": "cn-xianhz-1",
```

```
"flavor_id": "3169caaf-6c2f-41d5-aadd-c8fc3d83597e",
"flavor_ref": "gaussdb.large.4",
"max_connections": null,
"vcpus": "1",
"ram": "4",
"need_restart": false,
"priority": 1
}
],
"time_zone": "UTC+08:00",
"backup_used_space": 0,
"az_mode": "single",
"master_az_code": "az1xahz",
"maintenance_window": "18:00-22:00"
}
}
```

Status Code

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

Error Code

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

5.3.5 Creating a Read Replica

Function

This API is used to create a read replica. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
POST https://{endpoint}/mysql/v3/{project_id}/instances/{instance_id}/nodes/enlarge
- Example
POST https://{endpoint}/mysql/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfsae3435in01/nodes/enlarge
- Parameter description

Table 5-37 Parameter description

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

Name	Mandatory	Description
instance_id	Yes	Instance ID, which is compliant with the UUID format.

Request

Table 5-38 Parameter description

Name	Mandatory	Type	Description
priorities	Yes	List<Integer>	Failover priority of a read replica. Failover priority ranges from 1 for the first priority to 16 for the last priority. This priority determines the order in which read replicas are promoted when recovering from a primary node failure. Read replicas with the same priority have a same probability of being promoted to the new primary node.
is_auto_pay	No	String	Whether the order will be automatically paid after yearly/monthly instances are created. <ul style="list-style-type: none"> true: indicates the order will be automatically paid from your account. The default value is true. false: indicates the order will be manually paid.

- Request example

```
{
  "priorities": [1],
}
```

Response

- Normal response

Table 5-39 Parameter description

Name	Type	Description
instance_id	String	DB instance ID.
node_names	List<String>	Node name.

Name	Type	Description
job_id	String	ID of the task for creating a read replica.
order_id	String	Order ID. This parameter is returned only when yearly/monthly instances are created.

- Example normal response

```
{
  "instance_id":"f381d0b539e644df8f5b0d3a62129515in07",
  "node_names":["gauss-ccf5_node03"],
  "job_id":"0f6b6a9e-bd39-4e95-9374-e4d134e5a3d1"
}
```

Status Code

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

Error Code

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

5.3.6 Deleting a Read Replica

Function

This API is used to delete a read replica. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
DELETE https://{endpoint}/mysql/v3/{project_id}/instances/{instance_id}/nodes/{node_id}
- Example
DELETE https://{endpoint}/mysql/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfsdae3435in01/nodes/d11ae66fsfsaer3w3ino9
- Parameter description

Table 5-40 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	Yes	Instance ID, which is compliant with the UUID format.
node_id	Yes	Read-only node ID, which is compliant with the UUID format.

Request

None

Response

- Normal response

Table 5-41 Parameter description

Name	Type	Description
job_id	String	ID of the task for deleting a read replica.

- Example normal response

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

Status Code

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

Error Code

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

5.3.7 Scaling up Storage of a Yearly/Monthly DB Instance

Function

This API is used to scale up storage space of a yearly/monthly DB instance. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
POST `https://{endpoint}/mysql/v3/{project_id}/instances/{instance_id}/volume/extend`
- Example
POST `https://{endpoint}/mysql/v3/0483b6b16e954cb88930a360d2c4e663/instances/dsfae23fsfsae3435in01/volume/extend`
- Parameter description

Table 5-42 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	Yes	Instance ID, which is compliant with the UUID format.

Request

Table 5-43 Parameter description

Name	Mandatory	Type	Description
size	Yes	Integer	Storage space after expansion. The value ranges from 40 GB to 128,000 GB. The minimum increment for each scaling is 10 GB.
is_auto_pay	No	String	Whether the order will be automatically paid. <ul style="list-style-type: none">• true: indicates the order will be automatically paid from your account. The default value is true.• false: indicates the order will be manually paid.

- Request example

```
{  
  "size":50,  
  "is_auto_pay":"true"  
}
```

Response

- Normal response

Table 5-44 Parameter description

Name	Type	Description
size	Integer	Storage space after expansion.
order_id	String	Order ID.

- Example normal response

```
{  
  "size":50,  
  "order_id": "CS2006231950I8NQA"  
}
```

Status Code

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

Error Code

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

5.3.8 Changing a DB Instance Name

Function

This API is used to change a DB instance name. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
PUT https://{endpoint}/mysql/v3/{project_id}/instances/{instance_id}/name
- Example
PUT <https://{endpoint}/mysql/v3/97b026aa9cc4417888c14c84a1ad9860/instances/c3ec2c6148ad4d71b1a8411a62df0d3cin07/name>
- Parameter description

Table 5-45 Parameter description

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

Request

Table 5-46 Parameter description

Name	Type	Mandatory	Description
name	String	Yes	DB instance name. Instances of the same type can have same names under the same tenant. The value consists of 4 to 64 characters and starts with a letter. It is case-sensitive and contains only letters, digits, hyphens (-), and underscores (_).

- Request example

```
{  
  "name": "gaussdb-name"  
}
```

Response

- Normal response

Table 5-47 Parameter description

Name	Type	Description
job_id	String	Task ID for changing an instance name.

- Example normal response

```
{  
  "job_id": "0f6b6a9e-bd39-4e95-9374-e4d134e5a3d1"  
}
```

Status Code

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

Error Code

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

5.3.9 Resetting a Database Password

Function

This API is used to reset a database password. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
POST https://{endpoint}/mysql/v3/{project_id}/instances/{instance_id}/password
- Example
POST https://{endpoint}/mysql/v3/97b026aa9cc4417888c14c84a1ad9860/instances/c3ec2c6148ad4d71b1a8411a62df0d3cin07/password
- Parameter description

Table 5-48 Parameter description

Name	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	String	No	DB instance ID.

Request

Table 5-49 Parameter description

Name	Type	Mandatory	Description
password	String	Yes	Database password. Valid value: The password consists of 8 to 32 characters and contains at least three types of the following: uppercase letters, lowercase letters, digits, and special characters (~!@#\$%^*_-=+?,()&). You are advised to enter a strong password to improve security and prevent security risks such as brute force cracking. If you enter a weak password, the system automatically determines that the password is invalid.

- Request example

```
{  
  "password": "Test_345612"  
}
```

Response

- Normal response
None
- Example normal response
{}

Status Code

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

Error Code

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

5.3.10 Modifying DB Instance Specifications

Function

This API is used to change DB instance specifications. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
POST https://{endpoint}/mysql/v3/{project_id}/instances/{instance_id}/action
- Example
POST https://{endpoint}/mysql/v3/97b026aa9cc4417888c14c84a1ad9860/instances/c3ec2c6148ad4d71b1a8411a62df0d3cin07/action
- Parameter description

Table 5-50 Parameter description

Name	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	String	No	DB instance ID.

Request

Table 5-51 Parameter description

Name	Type	Mandatory	Description
resize_flavor	Object	Yes	For details, see Table 5-52 .

Table 5-52 resize_flavor field data structure description

Name	Type	Mandatory	Description
spec_code	String	Yes	Specification code.

- Request example

```
{
  "resize_flavor": {
    "spec_code": "gaussdb.large.4"
  }
}
```

Example Request

Changing instance specifications

```
{
  "resize_flavor" : {
    "spec_code" : "taurus.large.4"
  }
}
```

Example Response

None

Status Code

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

Error Code

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

5.4 Backup Management

5.4.1 Modifying the Backup Policy

Function

This API is used to modify the backup policy. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
PUT https://{endpoint}/mysql/v3/{project_id}/instances/{instance_id}/backups/policy/update
- Example
PUT https://{endpoint}/mysql/v3/97b026aa9cc4417888c14c84a1ad9860/instances/c3ec2c6148ad4d71b1a8411a62df0d3cin07/backups/policy/update
- Parameter description

Table 5-53 Parameter description

Name	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	String	No	DB instance ID.

Request

Table 5-54 Parameter description

Name	Type	Mandatory	Description
backup_policy	object	Yes	Backup policy information. For details, see Table 5-55 .

Table 5-55 backup_policy field data structure description

Name	Type	Mandatory	Description
keep_days	Integer	Yes	Backup retention days. The value ranges from 1 to 732.
start_time	String	Yes	Backup time window. Automated backups will be triggered during the backup time window. The value cannot be empty. It must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format. <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 00. Example value: <ul style="list-style-type: none">21:00-22:00

Name	Type	Mandatory	Description
period	String	Yes	Backup cycle configuration. Data will be automatically backed up on the selected days every week. Value range: The value is a number separated by commas (,), indicating the days of the week. For example, the value 1,2,3,4 indicates that the backup period is Monday, Tuesday, Wednesday, and Thursday.
retention_num_backup_level1	Integer	No	Number of retained level-1 backups. The default value is 0 . This parameter is mandatory when the level-1 backup function is enabled. This parameter is unavailable when the level-1 backup function is disabled. Value: <ul style="list-style-type: none"> • 0 • 1

- Request example

```
{
  "backup_policy": {
    "keep_days": 7,
    "start_time": "19:00-20:00",
    "period": "1,2,3,4,5"
  }
}
```

Response

- Normal response

Table 5-56 Parameter description

Name	Type	Description
status	String	Backup status. Value: <ul style="list-style-type: none"> • BUILDING: Modification in progress • COMPLETED: Modification completed • FAILED: Modification failed
instance_id	String	DB instance ID.

Name	Type	Description
instance_name	String	DB instance name.

- Example normal response

```
{
  "status": "COMPLETED",
  "instance_id": "ef25188419f941309882d2986b2210b9in07",
  "instance_name": "gauss-fhc"
}
```

Status Code

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

Error Code

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

5.4.2 Creating a Manual Backup

Function

This API is used to create a manual backup. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
POST https://{endpoint}/mysql/v3/{project_id}/backups/create
- Example
POST https://{endpoint}/mysql/v3/0483b6b16e954cb88930a360d2c4e663/
backups/create
- Parameter description

Table 5-57 Parameter description

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

Request

Table 5-58 Parameter description

Name	Mandatory	Type	Description
instance_id	Yes	String	Instance ID, which is compliant with the UUID format.
name	Yes	String	Backup name. The value consists of 4 to 64 characters and starts with a letter. It is case-sensitive and contains only letters, digits, hyphens (-), and underscores (_).
description	No	String	Backup description. It contains a maximum of 256 characters and cannot contain the special characters (> <"&'=)

- Request example

```
{
  "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01",
  "name": "backup-1",
  "description": "manual backup"
}
```

Response

- Normal response

Table 5-59 Parameter description

Name	Type	Description
backup	Object	Backup information. For details, see Table 5-60 .

Table 5-60 backup field data structure description

Name	Type	Description
id	String	Backup ID.
name	String	Backup name.
description	String	Backup description.

Name	Type	Description
begin_time	String	Backup start time in the "yyyy-mm-ddThh:mm:ssZ" format, where "T" indicates the start time of the time field, and "Z" indicates the time zone offset.
status	String	Backup status. Value: <ul style="list-style-type: none">• BUILDING: Backup in progress• COMPLETED: Backup completed• FAILED: Backup failed• AVAILABLE: Backup available
type	String	Backup type. Value: <ul style="list-style-type: none">• manual: manual full backup
instance_id	String	DB instance ID.

- Example normal response

```
{
  "backup": {
    "id": "2f4ddb93-b901-4b08-93d8-1d2e472f30fe",
    "name": "backup-1",
    "begin_time": "2020-07-07T01:17:05+0800",
    "status": "BUILDING",
    "type": "manual",
    "instance_id": "d8e6ca5a624745bcb546a227aa3ae1cfin01",
    "description": "desc"
  }
}
```

Status Code

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

Error Code

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

5.4.3 Querying Backups

Function

This API is used to query backups according to search criteria. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
GET https://{endpoint}/mysql/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}
- Example
GET https://{endpoint}/mysql/v3/97b026aa9cc4417888c14c84a1ad9860/backups?
instance_id=c3ec2c6148ad4d71b1a8411a62df0d3cin07&backup_id=43e4feaab48f11e89039fa163ebaa7e4br01&backup_type=auto&offset=0&limit=10&begin_time=2020-07-06T10:41:14+0800&end_time=2020-07-16T10:41:14+0800
- Parameter description

Table 5-61 Parameter description

Name	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	String	No	DB instance ID.
backup_id	String	No	Backup ID.
backup_type	String	No	Backup type. Value: <ul style="list-style-type: none"> • auto: automated full backup • manual: manual full backup
offset	String	No	Index offset. If offset is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number.
limit	String	No	Number of records to be queried. The default value is 100 . The value must be a positive integer. The minimum value is 1 and the maximum value is 100 .
begin_time	String	No	Query start time. The format is "yyyy-mm-ddThh:mm:ssZ". T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.

Name	Type	Mandatory	Description
end_time	String	No	Query end time. The format is "yyyy-mm-ddThh:mm:ssZ" and the end time must be later than the start time. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.

Request

None

Response

- Normal response

Table 5-62 Parameter description

Name	Type	Description
backups	Array of objects	Backup information. For details, see Table 5-63 .
total_count	Integer	Total number of records.

Table 5-63 backups field data structure description

Name	Type	Description
id	String	Backup ID.
name	String	Backup name.
begin_time	String	Backup start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 .

Name	Type	Description
end_time	String	Backup end time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 .
status	String	Backup status. Value: <ul style="list-style-type: none"> ● BUILDING: Backup in progress ● COMPLETED: Backup completed ● FAILED: Backup failed ● AVAILABLE: Backup available
take_up_time	Integer	Backup duration in minutes.
type	String	Backup type. Value: <ul style="list-style-type: none"> ● auto: automated full backup ● manual: manual full backup
size	Double	Backup size in MB.
datastore	Object	Database information. For details, see Table 5-64 .
instance_id	String	DB instance ID.
backup_level	String	Backup level. This parameter is returned when the level-1 backup function is enabled. Value: <ul style="list-style-type: none"> ● 1: level-1 backup ● 2: level-2 backup ● 0: Backup being created or creation failed

Table 5-64 datastore field data structure description

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

- Example normal response

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

```
"name": "GaussDBforMySQL-gauss-e747-20200705185048266",
"begin_time": "2018-08-06T12:41:14+0800",
"end_time": "2018-08-06T12:45:14+0800",
"take_up_time": 2,
"status": "COMPLETED",
"type": "auto",
"size": 2803,
"datastore": {
  "type": "gaussdb-mysql",
  "version": "8.0"
},
"instance_id": "c3ec2c6148ad4d71b1a8411a62df0d3cin07",
"backup_level": "2"
}],
"total_count": 1
}
```

Status Code

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

Error Code

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

5.4.4 Querying an Automated Backup Policy

Function

This API is used to query an automated backup policy. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
GET https://{endpoint}/mysql/v3/{project_id}/instances/{instance_id}/backups/policy
- Example
GET https://{endpoint}/mysql/v3/97b026aa9cc4417888c14c84a1ad9860/instances/c3ec2c6148ad4d71b1a8411a62df0d3cin07/backups/policy
- Parameter description

Table 5-65 Parameter description

Name	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .

Name	Type	Mandatory	Description
instance_id	String	Yes	DB instance ID.

Request

None

Response

- Normal response

Table 5-66 Parameter description

Name	Type	Description
backup_policy	object	Backup policy information. For details, see Table 5-67 .

Table 5-67 backup_policy field data structure description

Name	Type	Description
keep_days	Integer	Backup retention days. Value: 1 to 732 Minimum value: 1 . Maximum value: 732
start_time	String	Backup time window. Automated backups will be triggered during the backup time window. The value must be a valid value in the "hh:mm-HH:MM" format. The current time is in the UTC format.
period	String	Backup cycle configuration. Data will be automatically backed up on the selected days every week. Value range: The value is a number separated by commas (,), indicating the days of the week.
retention_num_backup_level1	Integer	Number of retained level-1 backups. This parameter is returned when level-1 backup is enabled.

- Example normal response

```
{
  "backup_policy": {
    "keep_days": 7,
    "start_time": "19:00-20:00",
    "period": "1,2",
    "retention_num_backup_level1": 1
  }
}
```

Status Code

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

Error Code

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

5.5 Parameter Template Management

5.5.1 Querying Parameter Templates

Function

This API is used to query parameter templates, including all databases' default and custom parameter templates. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
- Example
GET <https://{endpoint}/mysql/v3/0483b6b16e954cb88930a360d2c4e663/configurations>
- Parameter description

Table 5-68 Parameter description

Name	Mandatory	Type	Description
project_id	Yes	String	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .

Request

None

Response

- Normal response

Table 5-69 Parameter description

Name	Type	Description
configurations	Array of objects	Parameter template list. For details, see Table 5-70 .
total_count	Integer	Total number of parameter templates.

Table 5-70 configurations field data structure description

Name	Type	Description
id	String	Parameter template ID.
name	String	Parameter template name.
description	String	Parameter template description.
datastore_version_name	String	DB version name.
datastore_name	String	DB name.
created	String	Creation time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 .
updated	String	Update time in the "yyyy-MM-ddTHH:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as +0800 .
user_defined	Boolean	Whether the parameter template is a custom template. <ul style="list-style-type: none">• false: The parameter template is a default template.• true: The parameter template is a custom template.

- Example normal response

```
{
  "configurations":[
    {
      "id":"1ad028f5f6b8482483948860feb33339pr07",
      "name":"DBS_GaussDB_ParameterTemple_Apply_001",
      "description":"GaussDB-Test",
      "datastore_version_name":"8.0",
      "datastore_name":"gaussdb-mysql",
      "created":"2020-04-08 07:12:17",
      "updated":"2020-04-08 07:12:17",
      "user_defined":true,
    }
  ]
}
```

Status Code

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

Error Code

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

5.6 Quota Management

5.6.1 Querying the Instance Quotas of a Tenant

Function

This API is used to modify the resource quotas of a specified enterprise project. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

GET /mysql/v3/{project_id}/project-quotas

Table 5-71 URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain this value, see Obtaining a Project ID .

Table 5-72 Query parameters

Parameter	Mandatory	Type	Description
type	No	String	Resource type used to filter quotas. Its value can be instance .

Request Parameters

Table 5-73 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	No	String	User token.
X-Language	No	String	Language.

Response Parameters

Status code: 200

Table 5-74 Response body parameters

Parameter	Type	Description
quotas	Object	Tenant instance quota information.

Table 5-75 project-quotas

Parameter	Type	Description
resources	Array of objects	Resource list objects.

Table 5-76 resource

Parameter	Type	Description
type	String	Quota of the specified type. The value is instance , which indicates the instance quota.
used	Integer	Number of created resources.
quota	Integer	Maximum resource quota.

Status code: 400

Table 5-77 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Status code: 500

Table 5-78 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Example Request

GET https://{endpoint}/mysql/v3/054e292c9880d4992f02c0196d3ea468/quotas?type=instance

Example Response

Status code: 200

Success.

```
{
  "quotas" : {
    "resources" : [ {
      "type" : "instance",
      "used" : 4,
      "quota" : 50
    } ]
  }
}
```

Status Code

Status Code	Description
200	Success.
400	Client error.
500	Server error.

Error Code

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

5.6.2 Querying Resource Quotas

Function

This API is used to obtain the resource quotas of a specified enterprise project. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
GET https://{endpoint}/mysql/v3/{project_id}/quotas
- Example
GET https://{endpoint}/mysql/v3/619d3e78f61b4be68bc5aa0b59edcf7b/quotas
- Parameter description

Table 5-79 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
offset	No	Index offset. If offset is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The value is 0 by default, indicating that the query starts from the first piece of data. The value cannot be a negative number.
limit	No	Number of records to be queried. The default value is 10 . The value must be a positive integer. The minimum value is 1 and the maximum value is 100 .
enterprise_project_name	No	Enterprise project name.

Request

None

Response

- Parameter description

Table 5-80 Parameter description

Name	Type	Description
quota_list	Array of objects	Quota information list. For details, see Table 5-81 .
total_count	Integer	Number of quota records.

Table 5-81 quota_list field data structure description

Name	Type	Description
enterprise_project_id	String	Enterprise project ID.
enterprise_project_name	String	Enterprise project name.
instance_quota	Integer	Quota of the DB instance quantity.
vcpus_quota	Integer	Quota of vCPUs.
ram_quota	Integer	Memory quota in GB.
availability_instance_quota	Integer	Remaining quota of DB instances.
availability_vcpus_quota	Integer	Remaining quota of vCPUs.
availability_ram_quota	Integer	Remaining memory quota.

- Example response

```
"quota_list": [  
  {  
    "enterprise_project_id": "0",  
    "enterprise_project_name": "default",  
    "instance_quota": 20,  
    "vcpus_quota": 20,  
    "ram_quota": 40,  
    "availability_instance_quota": 1,  
    "availability_vcpus_quota": 4,  
    "availability_ram_quota": 8  
  },  
  {  
    "enterprise_project_id": "d72ebb42-9110-464c-a8e2-f9b9f349f80f",  
    "enterprise_project_name": "eps_auto_test",  
    "instance_quota": 0,  
    "vcpus_quota": 0,  
    "ram_quota": 0,  
  }  
]
```



```
"availability_instance_quota ": 1,  
"availability_vcpus_quota ": 4,  
"availability_ram_quota ": 8  
}  
],  
"total_count": 2  
}
```

Status Code

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

Error Code

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

5.6.3 Configuring Resource Quotas

Function

This API is used to configure resource quotas for a specified enterprise project. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
POST https://{endpoint}/mysql/v3/{project_id}/quotas
- Example
POST <https://{endpoint}/mysql/v3/0483b6b16e954cb88930a360d2c4e663/quotas>
- Parameter description

Table 5-82 Parameter description

Name	Mandator y	Description
project_id	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .

Status Code

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

Error Code

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

5.6.4 Modifying Resource Quotas

Function

This API is used to modify the resource quotas of a specified enterprise project. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
PUT https://{endpoint}/mysql/v3/{project_id}/quotas
- Example
PUT https://{endpoint}/mysql/v3/0483b6b16e954cb88930a360d2c4e663/quotas
- Parameter description

Table 5-83 Parameter description

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

Request

- Parameter description

Table 5-84 quota_list field data structure description

Name	Type	Description
enterprise_project_id	String	Enterprise project ID.
instance_quota	Integer	Quota of the DB instance quantity. The value ranges from 0 to 1000 . (If there are already DB instances created, this parameter value must be at least the number of existing DB instances.)
vcpus_quota	Integer	Quota of vCPUs. Value: 0 to 3600000 . (If there are already DB instances created, this parameter value must be at least the number of used vCPUs.)

Name	Type	Description
ram_quota	Integer	Memory quota in GB. Memory quota in GB. Value: 0 to 19200000 . (If there are already DB instances created, this parameter value must be at least the used memory size.)

- Request example

```
{
  "quota_list": [
    {
      "enterprise_project_id": "0",
      "instance_quota": 1,
      "vcpus_quota": 4,
      "ram_quota": 8
    }
  ]
}
```

Response

- Parameter description

Table 5-85 Parameter description

Name	Type	Description
quota_list	Array of objects	Configured quota information. For details, see Table 5-86 .

Table 5-86 quota_list field data structure description

Name	Type	Description
enterprise_project_id	String	Enterprise project ID.
instance_quota	Integer	Quota of the DB instance quantity.
vcpus_quota	Integer	Quota of vCPUs.
ram_quota	Integer	Memory quota in GB.

- Example response

```
{
  "quota_list": [
    {
      "enterprise_project_id": "0",
      "instance_quota": 1,
      "vcpus_quota": 4,
      "ram_quota": 8
    }
  ]
}
```

```
]
}
```

Status Code

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

Error Code

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

5.7 Log Management

5.7.1 Querying Database Error Logs

Function

This API is used to query database error logs. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
GET https://{endpoint}/mysql/v3/{project_id}/instances/{instance_id}/errorlog?offset={offset}&limit={limit}&level={level}&start_date={start_date}&end_date={end_date}&node_id={node_id}
- Example
GET https://{endpoint}/mysql/v3/97b026aa9cc4417888c14c84a1ad9860/instances/c3ec2c6148ad4d71b1a8411a62df0d3cin07/errorlog?offset=0&limit=100&level=ALL&start_date=2018-08-06T10:41:14+0800&end_date=2018-08-07T10:41:14+0800&node_id=cc07c60e94ec4575989840e648fb4f66no07
- Parameter description

Table 5-87 Parameter description

Name	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	String	Yes	DB instance ID.
node_id	String	Yes	Instance node ID.

Name	Type	Mandatory	Description
start_date	String	Yes	Start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
end_date	String	Yes	End time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset. Only error logs generated within the last month can be queried.
offset	Integer	No	Index offset. If offset is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The default value is 0 , indicating that the query starts from the first piece of data. The value must be a positive integer and the minimum value is 0 .
limit	Integer	No	Number of records to be queried. The default value is 10 . The value must be a positive integer. The minimum value is 1 and the maximum value is 100 .
level	String	No	Log level. The default value is ALL . Valid value: <ul style="list-style-type: none">• ALL• INFO• WARNING• ERROR• FATAL• NOTE

Request

None.

Response

- Normal response

Table 5-88 Parameter description

Name	Type	Description
error_log_list	Array of objects	Error log details. For details, see Table 3.
total_record	Integer	Total number of records.

Table 5-89 error_log_list parameter description

Name	Type	Description
node_id	String	Node ID.
time	String	Time in the UTC format.
level	String	Log level. <ul style="list-style-type: none">• ALL• INFO• WARNING• ERROR• FATAL• NOTE
content	String	Error log content.

- Example normal response

```
{  
  "error_log_list": [  
    {  
      "node_id": "cc07c60e94ec4575989840e648fb4f66no07",  
      "time": "2021-03-06T12:07:05",  
      "level": "ERROR",  
      "content": "[MY013508] [Repl] do failed: 1"  
    }  
  ],  
  "total_record": 15  
}
```

Status Code

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

Error Code

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

5.7.2 Querying Database Slow Logs

Function

This API is used to query database slow logs. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
GET `https://{endpoint}/mysql/v3/{project_id}/instances/{instance_id}/slowlog?offset={offset}&limit={limit}&level={level}&start_date={start_date}&end_date={end_date}&node_id={node_id}`
- Example
GET `https://{endpoint}/mysql/v3/97b026aa9cc4417888c14c84a1ad9860/instances/c3ec2c6148ad4d71b1a8411a62df0d3cin07/slowlog?offset=0&limit=100&level=ALL&start_date=2018-08-06T10:41:14+0800&end_date=2018-08-07T10:41:14+0800&node_id=cc07c60e94ec4575989840e648fb4f66no07`
 - Parameter description

Table 5-90 Parameter description

Name	Type	Mandatory	Description
project_id	String	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
instance_id	String	Yes	DB instance ID.
node_id	String	Yes	Instance node ID.
start_date	String	Yes	Start time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between calendar and hourly notation of time. Z indicates the time zone offset.

Name	Type	Mandatory	Description
end_date	String	Yes	End time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between calendar and hourly notation of time. Z indicates the time zone offset. Only error logs generated within the last month can be queried.
offset	Integer	No	Index offset. If offset is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. The default value is 0 , indicating that the query starts from the first piece of data. The value must be a positive integer and the minimum value is 0 .
limit	Integer	No	Number of records to be queried. The default value is 10 . The value must be a positive integer. The minimum value is 1 and the maximum value is 100 .
type	String	No	Statement type. The default value All . If this parameter is left empty, all statement types are queried. Valid value: <ul style="list-style-type: none"> • ALL • INSERT • UPDATE • SELECT • DELETE • CREATE • DROP • ALTER

Request

None.

Response

- Normal response

Table 5-91 Parameter description

Name	Type	Description
slow_log_list	Array of objects	Slow log information. For details, see Table 3.

Name	Type	Description
long_query_time	String	Threshold of slow logs in seconds.
total_record	Integer	Total number of records.

Table 5-92 error_log_list parameter description

Name	Type	Description
node_id	String	Node ID.
time	String	Execution time.
count	String	Number of executions.
lock_time	String	Lock wait time.
rows_sent	String	Number of sent rows.
rows_examined	String	Number of scanned rows.
database	String	Database which slow logs belong to.
users	String	Account.
query_sample	String	Execution syntax.
type	String	Statement type.
start_time	String	Time in the UTC format.
client_ip	String	IP address.

- Example normal response

```
{
  "slow_log_list":[
    {
      "node_id":"cc07c60e94ec4575989840e648fb4f66no07",
      "count":"1",
      "time":"1.04899 s",
      "lock_time":"0.00003 s",
      "rows_sent":"0",
      "rows_examined":"0",
      "database":"gaussdb-mysql",
```

```
"users":"root",
"query_sample":"INSERT INTO time_zone_name (Name, Time_zone_id)
VALUES (N, @time_zone_id);",
"type":"INSERT",
"start_time":"2121-03-25T10:55:16",
"client_ip ":"192.*.*.1"
}
],
"long_query_time":" 10",
"total_record":15
}
```

Status Code

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

Error Code

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

5.8 Task Information Queries

5.8.1 Obtaining Information About a Task

Function

This API is used to obtain task information from the task center. Before calling this API:

- Learn how to [authorize and authenticate](#) it.
- Obtain the required [region and endpoint](#).

URI

- URI format
GET https://{endpoint}/mysql/v3/{project_id}/jobs?id={id}
- Example
GET https://{endpoint}/mysql/v3/0483b6b16e954cb88930a360d2c4e663/jobs?id=a9767ede-fe0f-4888-9003-e843a4c90514
- Parameter description

Table 5-93 Parameter description

Name	Mandatory	Description
project_id	Yes	Project ID of a tenant in a region. To obtain this value, see Obtaining a Project ID .
id	Yes	Task ID.

Request

None

Response

- Normal response

Table 5-94 Parameter description

Name	Type	Description
job	Object	Task information. For details, see Table 5-95 .

Table 5-95 job field data structure description

Name	Type	Description
id	String	Task ID.
name	String	Task name.
status	String	Task execution status. Valid value: <ul style="list-style-type: none"> • Running: The task is being executed. • Completed: The task is successfully executed. • Failed: The task fails to be executed.
created	String	Creation time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.

Name	Type	Description
ended	String	End time in the "yyyy-mm-ddThh:mm:ssZ" format. T is the separator between the calendar and the hourly notation of time. Z indicates the time zone offset.
process	String	Task execution progress.
instance	Object	DB instance on which the task is executed. For details, see Table 5-96 .
entities	Object	Displayed information varies depending on tasks. For details, see Table 5-97 .
fail_reason	String	Task failure information.

Table 5-96 instances field data structure description

Name	Type	Description
id	String	DB instance ID.
name	String	DB instance name.

Table 5-97 entities field data structure description

Name	Type	Description
instance	Object	DB instance queried in the task. For details, see Table 5-98 .
resource_ids	List<String>	Resource ID involved in a task.

Table 5-98 entities.instance field data structure description

Name	Type	Description
endpoint	String	DB instance connection address.
type	String	DB instance type.
datastore	Object	DB information. For details, see Table 5-99 .

Table 5-99 datastore field data structure description

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

Table 5-100 entities field data structure description (binding or unbinding an EIP)

Name	Type	Description
public_ip	String	EIP used in the task.

NOTE

In the response example, some tasks in the task center are used as examples.

- Example normal response

```
{
  "job": {
    "id": "31b8ae23-c687-4d80-b7b4-42a66c9bb886",
    "name": " RestartGaussDBInstance",
    "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-gaussdb"
    },
  },
  "entities": {}
}
```

Status Code

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

Error Code

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

6 Permissions Policies and Supported Actions

6.1 Permissions Policies and Supported Actions

This chapter describes fine-grained permissions management for your GaussDB(for MySQL). If your account does not need individual IAM users, then you may skip over this chapter.

By default, new IAM users do not have permissions assigned. You need to add a user to one or more groups, and attach permissions policies or roles to these groups. Users inherit permissions from the groups to which they are added and can perform specified operations on cloud services based on the permissions.

You can grant users permissions by using [Roles](#) and [Policies](#). Roles are a type of coarse-grained authorization mechanism that defines permissions related to user responsibilities. Policies define API-based permissions for operations on specific resources under certain conditions, allowing for more fine-grained, secure access control of cloud resources.

NOTE

Policy-based authorization is useful if you want to allow or deny the access to an API.

An account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. The permissions required for calling an API are determined by the actions supported by the API. Only users who have been granted permissions allowing the actions can call the API successfully. For example, if an IAM user queries GaussDB instances using an API, the user must have been granted permissions that allow the **gaussdb:instance:list** action.

Supported Actions

GaussDB(for MySQL) provides system-defined policies that can be directly used in IAM. You can also create custom policies and use them to supplement system-defined policies, implementing more refined access control. Operations supported by policies are specific to APIs. The following are common concepts related to policies:

- **Permission:** A statement in a policy that allows or denies certain operations.
- **APIs:** REST APIs that can be called in a custom policy.
- **Actions:** Added to a custom policy to control permissions for specific operations.
- **Related actions:** Actions on which a specific action depends to take effect. When assigning permissions for the action to a user, you also need to assign permissions for the dependent actions.
- **IAM projects or enterprise projects:** Type of projects in which policies can be used to grant permissions. A policy can be applied to IAM projects, enterprise projects, or both. Policies that contain actions supporting both IAM and enterprise projects can be assigned to user groups and take effect in both IAM and Enterprise Management. Policies that only contain actions supporting IAM projects can be assigned to user groups and only take effect for IAM. Such policies will not take effect if they are assigned to user groups in Enterprise Management. For details about the differences between IAM and enterprise projects, see [Differences Between IAM and Enterprise Management](#).

 **NOTE**

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

6.2 GaussDB(for MySQL) Actions

Table 6-1 Actions

Permissions	APIs	Actions	IAM Project	Enterprise Project
Querying Resource Quotas	GET /mysql/v3/{project_id}/quotas	gaussdb:instance:list	√	√
Configuring Resource Quotas	POST /mysql/v3/{project_id}/quotas	gaussdb:quota:modify	√	√
Modifying Resource Quotas	PUT /mysql/v3/{project_id}/quotas	gaussdb:quota:modify	√	√
Querying Version Information About a DB Engine	GET /mysql/v3/{project_id}/datastores/{database_name}	gaussdb:instance:list	√	√

Permissions	APIs	Actions	IAM Project	Enterprise Project
Querying Database Specifications	GET /mysql/v3/ {project_id}/ flavors/ {database}? version_name={ve rsion_name}&spe c_code={spec_cod e}	gaussdb:instan ce:list	√	√
Creating a DB Instance	POST /mysql/v3/ {projectId}/ instances	gaussdb:instan ce:create	√	√
Querying DB Instances	GET /mysql/v3/ {projectId}/ instances	gaussdb:instan ce:list	√	√
Querying Details of a DB Instance	GET /mysql/v3/ {project_id}/ instances/ {instance_id}	gaussdb:instan ce:list	√	√
Deleting a DB Instance	DELETE /mysql/v3/ {project_id}/ instances/ {instance_id}	gaussdb:instan ce:delete	√	√
Querying Parameter Templates	GET /mysql/v3/ {project_id}/ configurations	gaussdb:param :list	√	√
Obtaining Task Information	GET /mysql/v3/ {projectId}/jobs	gaussdb:instan ce:list	√	√
Creating a Read Replica	POST /mysql/v3/ {project_id}/ instances/ {instance_id}/ nodes/enlarge	gaussdb:instan ce:create	√	√

Permissions	APIs	Actions	IAM Project	Enterprise Project
Deleting a Read Replica	DELETE /mysql/v3/ {project_id}/ instances/ {instance_id}/ nodes/{node_id}	gaussdb:instance:delete	√	√
Scaling up Storage Space of a Yearly/Monthly Instance	POST /mysql/v3/ {project_id}/ instances/ {instance_id}/ volume/extend	gaussdb:instance:modifySpec	√	√
Changing a DB Instance Name	PUT /mysql/v3/ {project_id}/ instances/ {instance_id}/ name	gaussdb:instance:modify	√	√
Resetting a Database Password	POST /mysql/v3/ {project_id}/ instances/ {instance_id}/ password	gaussdb:instance:modify	√	√
Changing DB Instance Specifications	POST /mysql/v3/ {project_id}/ instances/ {instance_id}/ action	gaussdb:instance:modifySpec	√	√
Creating a Manual Backup	POST /mysql/v3/ {project_id}/ backups/create	gaussdb:backup:create	√	√
Querying a Backup List	GET /mysql/v3/ {project_id}/ backups	gaussdb:backup:list	√	√

Permissions	APIs	Actions	IAM Project	Enterprise Project
Querying an Automated Backup Policy	GET /mysql/v3/ {project_id}/ instances/ {instance_id}/ backups/policy	gaussdb:backup:list	√	√
Modifying an Automated Backup Policy	PUT /mysql/v3/ {project_id}/ instances/ {instance_id}/ backups/policy/ update	gaussdb:instance:modifyBackupPolicy	√	√

7 Appendix

7.1 Abnormal Request Results

- Abnormal response description

Table 7-1 Abnormal response description

Name	Type	Description
error_code	String	Returned error code when a task submission exception occurs. For details, see Error Codes .
error_msg	String	Returned error description when a task submission exception occurs.

- Example response

```
{
  "error_code": "DBS.280234",
  "error_msg": "Invalid DB instance name."
}
```

7.2 Status Codes

The following table describes status codes.

Table 7-2 Status codes

Status Code	Message	Description
100	Continue	The client should continue with its request. This interim response is used to inform the client that the initial part of the request has been received and has not yet been rejected by the server.
101	Switching Protocols	The protocol should be switched. The protocol can only be switched to a more advanced protocol. For example, the current HTTP protocol is switched to a later version.
200	OK	Request succeeded.
201	Created	The request for creating a resource or task has been fulfilled.
202	Accepted	The request has been accepted, but the processing has not been completed.
203	Non-Authoritative Information	Unauthorized information. The request is successful.
204	NoContent	The server has successfully processed the request, but has not returned any content. The status code is returned in response to an HTTP OPTIONS request.
205	Reset Content	The server has fulfilled the request, but the requester is required to reset the content.
206	Partial Content	The server has processed certain GET requests.
300	Multiple Choices	There are multiple options for the location of the requested resource. The response contains a list of resource characteristics and addresses from which the user or user agent (such as a browser) can choose the most appropriate one.
301	Moved Permanently	The requested resource has been assigned a new permanent URI, and the new URI is contained in the response.
302	Found	The requested resource was temporarily moved.
303	See Other	The response to the request can be found under a different URI and should be retrieved using a GET or POST method.

Status Code	Message	Description
304	Not Modified	The requested resource has not been modified. In such a case, there is no need to retransmit the resource since the client still has a previously-downloaded copy.
305	Use Proxy	The requested resource must be accessed through a proxy.
306	Unused	The HTTP status code is no longer used.
400	BadRequest	Invalid request. The client should not repeat the request without modifications.
401	Unauthorized	The status code is returned after the client provides the authentication information, indicating that the authentication information is incorrect or invalid.
402	Payment Required	This status code is reserved for future use.
403	Forbidden	The server understood the request, but is refusing to fulfill it. The client should not repeat the request without modifications.
404	NotFound	The requested resource cannot be found. The client should not repeat the request without modifications.
405	MethodNotAllowed	The method specified in the request is not supported for the requested resource. The client should not repeat the request without modifications.
406	Not Acceptable	The server cannot fulfill the request according to the content characteristics of the request.
407	Proxy Authentication Required	This status code is similar to 401, but indicates that the client must first authenticate itself with the proxy.
408	Request Time-out	The server timed out waiting for the request. The client may repeat the request without modifications at any later time.

Status Code	Message	Description
409	Conflict	The request could not be processed due to a conflict. This status code indicates that the resource that the client attempts to create already exists, or the request fails to be processed because of the update of the conflict request.
410	Gone	The requested resource is no longer available. The requested resource has been deleted permanently.
411	Length Required	The server refuses to process the request without a defined Content-Length.
412	Precondition Failed	The server does not meet one of the preconditions that the requester puts on the request.
413	Request Entity Too Large	The request is larger than that a server is able to process. The server may close the connection to prevent the client from continuing the request. If the server temporarily cannot process the request, the response will contain a Retry-After header field.
414	Request-URI Too Large	The URI provided was too long for the server to process.
415	Unsupported Media Type	The server is unable to process the media format in the request.
416	Requested range not satisfied	The requested range is invalid.
417	Expectation Failed	The server fails to meet the requirements of the Expect request-header field.
422	UnprocessableEntity	The request is well-formed but is unable to be processed due to semantic errors.
429	TooManyRequests	The client has sent more requests than its rate limit is allowed within a given amount of time, or the server has received more requests than it is able to process within a given amount of time. In this case, it is advisable for the client to re-initiate requests after the time specified in the Retry-After header of the response expires.
500	InternalServerError	The server is able to receive the request but it could not understand the request.

Status Code	Message	Description
501	Not Implemented	The server does not support the requested function.
502	Bad Gateway	The server acting as a gateway or proxy receives an invalid response from a remote server.
503	ServiceUnavailable	The requested service is invalid. The client should not repeat the request without modifications.
504	ServerTimeout	The request cannot be fulfilled within a given time. The response will reach the client only if the request carries a timeout parameter.
505	HTTP Version not supported	The server does not support the HTTP protocol version used in the request.

7.3 Error Codes

The following table describes error codes.

Table 7-3 Error codes

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.200001	Parameter error.	Parameter error.	Check whether the transferred parameters or URLs are correct.
400	DBS.200004	Parameter error.	Parameter error.	Check whether the transferred parameters or URLs are correct.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.200006	The request is null. Enter a request parameter.	The request is null. Enter a request parameter.	Check whether any mandatory request parameter is empty.
400	DBS.200021	Invalid DB instance name.	Invalid DB instance name.	Check whether the instance name is correct.
400	DBS.200023	Storage space is out of range.	The storage space is out of range.	Check whether the storage space exceeds the allowed range.
400	DBS.200024	Invalid region.	Invalid region.	Check whether the region is correct and whether the region is available.
400	DBS.200025	Invalid AZ.	Invalid AZ.	Check whether the AZ name is correct and whether the AZ is available.
400	DBS.200026	Invalid storage type.	Invalid storage type.	Check whether the storage type is correct.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.200027	Storage space must be a multiple of 10.	Storage space must be a multiple of 10.	Check whether the storage space is a multiple of 10.
400	DBS.200040	The DB engine or version is not supported.	The DB engine or version is not supported.	Check whether the DB engine and version match and meet the requirements.
400	DBS.200041	Invalid database version.	Invalid database version.	Check whether the database version is supported.
400	DBS.200042	The DB engine does not exist.	The DB engine does not exist.	Check whether the DB engine is supported by GaussDB.
400	DBS.200043	Invalid synchronize model.	Invalid synchronize model.	Check whether the HA synchronization model meets the requirements.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.200048	Invalid VPC ID.	Invalid VPC ID.	Check whether the VPC ID and name are correct and meet the requirements.
400	DBS.200049	Invalid subnet ID.	Invalid subnet ID.	Check whether the subnet ID and name are correct and meet the requirements.
400	DBS.200051	Invalid HA mode.	Invalid HA mode.	Check whether the HA mode meets the requirements.
400	DBS.200052	Invalid database root password.	Invalid database root password.	Check whether the username and password match and whether the password meets the requirements.
400	DBS.200053	The selected specifications do not exist.	The selected specifications do not exist.	Check whether the specifications are correct and available in the current AZ.
400	DBS.200054	Invalid specifications.	Invalid specifications.	Check whether the specifications are correct and available in the current AZ.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.200056	The maximum number of nodes has been reached.	The maximum number of nodes has been reached.	Check whether the number of instance nodes reaches the upper limit.
400	DBS.200063	Invalid cluster mode.	Invalid cluster mode.	Check whether the cluster mode is valid.
400	DBS.200086	This operation is not allowed by the DB instance status.	This operation is not allowed by the DB instance status.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.200087	The number of tags added for the DB instance has reached the quota.	The number of tags added for the DB instance has reached the quota.	Check whether the number of tags for the DB instance exceeds the upper limit.
400	DBS.200098	The tag already exists.	The tag already exists.	Check whether the tag exists.
400	DBS.200302	Storage space must be a multiple of 10.	Storage space must be a multiple of 10.	Check whether the storage space is a multiple of 10.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.200306	The new storage space must be greater than or equal to the original storage space.	The new storage space must be at least the original storage space.	Check whether the storage space exceeds the upper limit.
400	DBS.200461	The parameter value is out of range.	The parameter value is out of range.	Check whether the port is valid.
400	DBS.200504	Invalid database version.	Invalid database version.	Check whether the database version is valid.
400	DBS.200543	The job does not exist.	The task does not exist.	Check whether the task ID is valid.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.200823	The database does not exist.	The database does not exist.	Check whether the input database does not exist.
400	DBS.200824	The database account does not exist.	The database account does not exist.	Check whether the database account exists.
400	DBS.201014	This operation is not allowed by the DB instance status.	This operation is not allowed by the DB instance status.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
400	DBS.201101	Invalid backup cycle.	Invalid backup cycle.	Check whether the backup cycle meets the requirements.
400	DBS.201103	Invalid backup start time.	Invalid backup start time.	Check whether the start time meets the requirement.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.201106	Invalid retention days.	Invalid retention days.	Check whether the backup retention period meets the requirements.
400	DBS.201203	The backup file does not exist.	The backup file does not exist.	Check whether the backup exists and matches the instance.
400	DBS.201207	The DB engine or version is not supported.	The DB engine or version is not supported.	Check whether the DB engine is supported by GaussDB.
400	DBS.201208	The operation is not allowed by the backup status.	The operation is not allowed by the backup status.	Check whether the status of the backup is Completed .

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.212002	Incorrect parameter group quota.	Incorrect parameter template quota.	The parameter template quota exceeds the upper limit. Delete unnecessary parameter templates and create a new one.
400	DBS.212003	Operation not allowed.	The operation is not allowed.	Default parameter templates cannot be reset or deleted.
400	DBS.212004	Parameter group update error.	The parameter template fails to be updated.	Check whether the parameter values to be changed are valid.
400	DBS.212005	The node does not belong to the group.	The node does not belong to the group.	Check whether the instance ID or node ID is correct.
400	DBS.212007	The DB engine does not exist.	The DB engine does not exist.	Check whether the DB engine exists.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.212008	The DB engine is not supported.	The DB engine is not supported.	Check whether the DB engine is supported by GaussDB.
400	DBS.212009	Task processing failed.	The task fails to be processed.	Contact customer service.
400	DBS.212010	The parameter group is being applied.	The parameter template is being applied.	Perform the operation after the application is complete.
400	DBS.212011	Application failed.	Failed to apply the parameter template.	Contact customer service.
400	DBS.212012	The parameter does not exist.	The parameter does not exist.	Check whether the parameter to be modified is correct.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.212014	The node does not have a default parameter group.	The node does not have a default parameter template.	Check whether the node ID or parameter template ID is correct.
400	DBS.212015	Partial success.	Partial success.	Check whether the parameters to be modified are correct.
400	DBS.212016	Parameter update failed.	Parameter update failed.	Contact customer service.
400	DBS.212017	Invalid parameter.	Parameter error.	Check whether the parameter name is valid.
400	DBS.212025	Update failed.	Update failed.	Contact customer service.
400	DBS.212030	Parameter error.	Parameter error.	The parameter template name already exists.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.212032	The parameter template has been applied.	The parameter template has been applied.	The parameter template has been applied and cannot be deleted.
400	DBS.212037	Parameters are incorrectly set.	Parameters are incorrectly configured.	Check whether the parameter values are valid or within the valid range.
400	DBS.270024	Proxy instance does not exist.	Proxy instance does not exist.	Check whether the tenant has the proxy instance, whether the input proxy instance ID is correct, and whether the proxy instance exists.
400	DBS.270025	Invalid weight.	Invalid weight.	Check whether the weight format and range are correct.
400	DBS.270026	Invalid proxy mode.	The proxy type is invalid.	Check whether the database proxy type is correct.
400	DBS.270027	Select a proxy instance.	No proxy instance is specified.	Check whether the proxy instance ID is null.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.280001	Parameter error.	Parameter error.	Check whether the transferred parameters or URLs are correct and meet the requirements.
400	DBS.280127	Invalid backup description.	Invalid backup description.	Check whether the backup description is correct and meets the requirements.
400	DBS.280128	The database name does not exist.	The database name does not exist.	Check whether the tenant has the DB instance, whether the DB instance name or ID is correct, and whether the DB instance exists.
400	DBS.280203	This is a weak password. Please enter a strong password.	This is a weak password. Enter a strong password.	Password is too easy to guess. Change it to a strong password.
400	DBS.280204	Invalid parameter.	Invalid parameter.	Check whether the parameter values are valid or within the valid range.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.280214	The backup does not exist.	The backup does not exist.	Check whether the backup retention period is correct.
400	DBS.280216	Invalid backup start time.	Invalid backup start time.	Check whether the backup start time meets the requirements and whether the requirements between the backup start time and end time are correct.
400	DBS.280235	Invalid database type.	Invalid database type.	Check whether the DB engine is correct.
400	DBS.280237	Datastore not specified.	Datastore is not specified.	Check whether the DB engine is supported by GaussDB.
400	DBS.280238	The DB engine or version is not supported.	The DB engine or version is not supported.	Check whether the DB engine and version match and meet the requirements.
400	DBS.280239	Invalid specifications.	Invalid specifications.	Check whether the specification code is correct, whether the specifications exist in the current AZ, and whether the specifications are supported.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.280241	Invalid storage type.	Invalid storage type.	Check whether the storage type is correct and meets the requirements.
400	DBS.280242	Storage space is out of range.	The storage space is out of range.	Check whether the specified storage space is correct.
400	DBS.280246	Invalid database root password.	Invalid database root password.	Check whether the username and password match and whether the password meets the requirements.
400	DBS.280250	Invalid backup retention days.	Invalid backup retention days.	Check whether the backup data retention period is valid or within the valid range.
400	DBS.280251	Invalid backup cycle.	Invalid backup cycle.	Check whether the backup cycle is valid or within the valid range.
400	DBS.280253	Invalid backup start time.	Invalid backup start time.	Check whether the backup start time meets the requirements and whether the requirements between the backup start time and end time are correct.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.280260	Invalid AZ mode.	Invalid AZ mode.	Check whether the AZ mode is valid.
400	DBS.280270	The parameter does not exist.	The parameter does not exist.	Check whether the parameters to be modified are correct.
400	DBS.280271	The parameter value is out of range.	The parameter value is out of range.	Check whether the parameter value is within the valid range.
400	DBS.280272	The tag key must be unique.	The tag key must be unique.	Check whether the new tag exists.
400	DBS.280277	Invalid object name.	Invalid backup name.	Check whether the backup name is correct and meets the requirements.
400	DBS.280285	Invalid AZ.	Invalid AZ.	Check whether the AZ name is correct and whether the AZ is available.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.280288	Invalid FlavorRef.	Invalid flavor.	Check whether the flavor ID is null or a null string.
400	DBS.280311	Invalid storage space size.	Invalid storage space.	Check whether the specified storage space is correct and meets the requirements.
400	DBS.280325	Invalid storage information.	Invalid storage information.	Check whether the storage space or type is valid.
400	DBS.280342	Invalid cluster mode.	Invalid cluster mode.	Check whether the instance mode is correct and whether the instance mode matches the instance ID.
400	DBS.280364	Invalid database port.	Invalid database port.	Check whether the database port is available.
400	DBS.280402	Invalid HA mode.	Invalid HA mode.	Check whether the HA mode meets the requirements.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.280404	Invalid DB instance ID or node ID format.	Invalid DB instance ID.	Check whether the instance ID is valid.
400	DBS.280434	Invalid specification code.	Invalid specification code.	Check whether the specification code complies with the rules, whether the specification exists, and whether the specification is available.
400	DBS.280439	Invalid records. Enter a positive integer less than 100.	Invalid value. Enter a positive integer of no more than 100.	Check whether the number of queried records is within the valid range.
400	DBS.280448	The storage type is sold out.	The storage type is sold out.	Check whether the current storage type is available.

Status Code	Error Code	Error Message	Description	Troubleshooting
400	DBS.280449	Operation not allowed on frozen objects.	Operation not allowed on frozen objects.	Check whether the instance is frozen and whether the current operation can be performed when the instance is frozen.
400	DBS.280450	The DB instance specifications are sold out.	The DB instance specifications are sold out.	Change the AZ or contact customer service.
400	DBS.290000	Parameter error.	Parameter error.	Check whether the transferred parameters or URLs are correct and meet the requirements.
400	DBS.290001	Invalid parameter letter case.	Invalid parameter letter case.	Check whether the parameter letter case is correct and meets the requirements.

Status Code	Error Code	Error Message	Description	Troubleshooting
403	DBS.200010	The DB instance ID or user ID may be null, or the operation is not authorized.	The DB instance ID or user ID may be null, or the operation is not authorized.	Check whether the input parameters are correct, whether the instance exists, and whether the tenant has unauthorized operations.
403	DBS.200044	Resource not found or permission denied.	Resource not found or permission denied.	Check whether the parameters are correctly configured, whether the access resources exist, and whether the tenant has the access permission.

Status Code	Error Code	Error Message	Description	Troubleshooting
403	DBS.200604	The DB instance ID or user ID may be null, or the operation is not authorized.	The DB instance ID or user ID may be null, or the operation is not authorized.	Check whether the input parameters are correct, whether the instance exists, and whether the tenant has unauthorized operations.
403	DBS.200810	You are not allowed to create databases on read replicas.	You are not allowed to create databases on read replicas.	Create databases on the primary node.

Status Code	Error Code	Error Message	Description	Troubleshooting
403	DBS.200819	You are not allowed to delete database users on read replicas.	You are not allowed to delete database users on read replicas.	Database users cannot be deleted from read replicas.
403	DBS.201003	Resource not found or permission denied.	Resource not found or permission denied.	Check whether the parameters are correctly configured, whether the access resources exist, and whether the tenant has the access permission.
403	DBS.280015	Resource not found or permission denied.	Resource not found or permission denied.	Check whether the parameters are correctly configured, whether the access resources exist, and whether the tenant has the access permission.
403	DBS.280056	Invalid token.	Invalid token.	Check whether the instance belongs to the tenant and whether the token has been obtained again.

Status Code	Error Code	Error Message	Description	Troubleshooting
404	DBS.200002	The DB instance does not exist.	The DB instance does not exist.	Check whether the instance and its ID are correct and whether the instance exists.
404	DBS.200008	The ECS information of the DB instance cannot be found.	The ECS information of the DB instance cannot be found.	Check whether the parameters are correctly configured and whether the instance status is normal.
404	DBS.200013	The original DB instance does not exist.	The original DB instance does not exist.	Check whether the instance and its ID are correct and whether the instance exists.
404	DBS.200045	The DB instance does not exist.	The DB instance does not exist.	Check whether the instance and its ID are correct and whether the instance exists.

Status Code	Error Code	Error Message	Description	Troubleshooting
404	DBS.200050	The security group does not exist or does not belong to the VPC.	The security group does not exist or does not belong to the VPC.	Check whether the security group ID is valid, whether the security group exists, and whether the private IP address for read of the node belongs to the security group.
404	DBS.200408	The DB instance does not exist.	The instance does not exist or has been deleted.	Check whether the instance and its ID are correct and whether the instance exists.
404	DBS.200470	The region or AZ does not exist.	The region or AZ does not exist.	Check whether the AZ is correct.
404	DBS.200501	The subnet does not exist or does not belong to the VPC.	The subnet does not exist or does not belong to the VPC.	Check whether the subnet ID and name exist and whether the subnet belongs to the VPC.

Status Code	Error Code	Error Message	Description	Troubleshooting
404	DBS.200503	The VPC does not exist or does not belong to the user.	The VPC does not exist or does not belong to the user.	Check whether the tenant has the VPC.
404	DBS.200602	The DB instance does not exist.	The DB instance does not exist.	Check whether the instance and its ID are correct and whether the instance exists.
404	DBS.201010	The backup information does not exist.	The backup information does not exist.	Check whether the backup exists and matches the instance.
404	DBS.201028	The DB instance does not exist.	The instance does not exist or has been deleted.	Check whether the instance and its ID are correct and whether the instance exists.
404	DBS.212001	The parameter group does not exist.	The parameter template does not exist.	Check whether the parameter template exists.

Status Code	Error Code	Error Message	Description	Troubleshooting
404	DBS.290002	The selected specifications do not exist.	The selected specifications do not exist.	Check whether the specifications are correct and available in the current AZ.
404	DBS.290005	The DB instance does not exist.	The DB instance does not exist.	Check whether the instance and its ID are correct and whether the instance exists.
404	DBS.290011	The DB instance does not exist.	The DB instance does not exist.	Check whether the instance and its ID are correct and whether the instance exists.
404	DBS.290013	Resource not found.	Resource not found.	Check whether the transferred parameters are correct and whether the DB instance exists.

Status Code	Error Code	Error Message	Description	Troubleshooting
409	DBS.200011	Another operation is being performed on the DB instance or the DB instance is faulty.	Another operation is being performed on the DB instance or the DB instance is faulty.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
409	DBS.200019	Another operation is being performed on the DB instance or the DB instance is faulty.	Another operation is being performed on the DB instance or the DB instance is faulty.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.

Status Code	Error Code	Error Message	Description	Troubleshooting
409	DBS.200022	The DB instance name already exists.	The DB instance name already exists.	Check whether the instance name exists.
409	DBS.200047	Another operation is being performed on the DB instance or the DB instance is faulty.	Another operation is being performed on the DB instance or the DB instance is faulty.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.

Status Code	Error Code	Error Message	Description	Troubleshooting
409	DBS.200316	This operation cannot be performed because the DB instance status is Storage full.	This operation cannot be performed because the DB instance status is Storage full .	Adjust the storage space.
409	DBS.200826	The database name already exists.	The database name already exists.	Check whether the database name is valid.
409	DBS.200827	The database user already exists.	The database user already exists.	Check whether the database user is valid.

Status Code	Error Code	Error Message	Description	Troubleshooting
409	DBS.200828	You are not allowed to create a database built-in account.	You are not allowed to create a database built-in account.	Check whether the database user is valid.
409	DBS.201202	Another operation is being performed on the DB instance or the DB instance is faulty.	Another operation is being performed on the DB instance or the DB instance is faulty.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
409	DBS.201205	Backup is in progress, please wait.	Backup is in progress.	Try again after the backup is complete.

Status Code	Error Code	Error Message	Description	Troubleshooting
409	DBS.212006	Another operation is being performed on the DB instance or the DB instance is faulty.	Another operation is being performed on the DB instance or the DB instance is faulty.	Check whether the instance status or the ongoing operation on the instance conflicts with the request.
409	DBS.280406	Operation not allowed by the DB instance type or status.	Operation not allowed by the DB instance type or status.	Check whether the instance type and instance status meet requirements.

Status Code	Error Code	Error Message	Description	Troubleshooting
413	DBS.200046	The number of DB instances has reached the quota.	The number of DB instances has reached the quota.	Contact the database administrator to adjust the quota.
413	DBS.290003	The number of DB instances has reached the quota.	The number of DB instances has reached the quota.	Contact the database administrator to adjust the quota.
422	DBS.212019	The parameter cannot be processed.	The parameter cannot be processed.	Check whether the parameter is valid.
500	DBS.108000	Server failure.	Server failure.	Contact customer service.
500	DBS.108002	Server failure.	Server failure.	Contact customer service.

Status Code	Error Code	Error Message	Description	Troubleshooting
500	DBS.108005	Server failure.	Server failure.	Contact customer service.
500	DBS.200005	Server failure.	Server failure.	Contact customer service.
500	DBS.200208	Server failure.	Server failure.	Contact customer service.
500	DBS.200811	Failed to create the database.	Failed to create the database.	Check whether resources are insufficient and then contact customer service.
500	DBS.200821	Failed to modify database user permissions.	Failed to modify database user permissions.	This operation is not allowed in the current instance status. Try again later.
500	DBS.213002	Failed to process the request.	Failed to process the request.	Internal service error. Contact customer service.
500	DBS.213004	Failed to process the request.	Failed to process the request.	Internal service error. Contact customer service.

Status Code	Error Code	Error Message	Description	Troubleshooting
500	DBS.290006	Failed to process the request.	Failed to process the request.	Internal service error. Contact customer service.
500	DBS.290015	Failed to process the request.	Failed to process the request.	Internal service error. Contact customer service.

7.4 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](#)
- [Obtain a Project ID from the Console](#)

Obtaining the Project ID by Calling an API

You can obtain the project ID by calling the API used to [query project information based on the specified criteria](#).

The API used to obtain a project ID is **GET https://{Endpoint}/v3/projects**. **{Endpoint}** is the IAM endpoint and can be obtained from 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"
}
}

```

Obtain a Project ID from the Console

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

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

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

----End

7.5 GaussDB(for MySQL) Monitoring Metrics

Function Description

This section describes namespaces, descriptions, and dimensions of monitoring metrics to be reported to Cloud Eye. You can use APIs provided by Cloud Eye to retrieve monitoring metrics and alarm information generated for GaussDB(for MySQL).

Namespace

SYS.GAUSSDB

Monitoring Metrics

Table 7-4 Monitoring metrics

Metric	Name	Description	Value Range	Remarks
gaussdb_mysql001_cpu_util	CPU Usage	CPU usage of the monitored object	0-100%	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance

Metric	Name	Description	Value Range	Remarks
gaussdb_mysql002_mem_util	Memory Usage	Memory usage of the monitored object	0-100%	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql004_bytes_in	Network Input Throughput	Incoming traffic in bytes per second	≥0 Bytes/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql005_bytes_out	Network Output Throughput	Outgoing traffic in bytes per second	≥0 Bytes/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql006_conn_count	Total Connections	Total number of connections that connect to the MySQL server	≥0 Connections	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql007_conn_active_count	Current Active Connections	Number of active connections	≥0 Connections	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql008_qps	QPS	Query times of SQL statements (including DDL, DML, SHOW, SET statements and storage procedures) per second	≥0 Times/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance

Metric	Name	Description	Value Range	Remarks
gaussdb_mysql009_tps	TPS	Execution times of submitted and rollback transactions per second	≥0 Times/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql010_innodb_buf_usage	Buffer Pool Usage	Ratio of used pages to total pages in the InnoDB buffer	0-100%	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql011_innodb_buf_hit	Buffer Pool Hit Ratio	Ratio of read hits to read requests in the InnoDB buffer	0-100%	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql012_innodb_buf_dirty	Buffer Pool Dirty Block Ratio	Ratio of dirty data to all data in the InnoDB buffer	0-100%	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql013_innodb_reads	InnoDB Read Throughput	Number of read bytes per second in the InnoDB buffer	≥0 Bytes/s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql014_innodb_writes	InnoDB Write Throughput	Number of write bytes per second in the InnoDB buffer	≥0 Bytes/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance

Metric	Name	Description	Value Range	Remarks
gaussdb_mysql017_innodb_log_write_req_count	InnoDB Log Write Requests per Second	Number of InnoDB log write requests per second	≥0 Requests/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql020_temp_tbl_count	Temporary Tables	Number of temporary tables automatically created on hard disks when MySQL statements are executed	≥0 Tables	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql028_comdml_del_count	DELETE Statements per Second	Number of DELETE statements executed per second	≥0 Statements/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql029_comdml_ins_count	INSERT Statements per Second	Number of INSERT statements executed per second	≥0 Statements/s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql030_comdml_ins_sel_count	INSERT_SELECT Statements per Second	Number of INSERT_SELECT statements executed per second	≥0 Statements/s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql031_comdml_rep_count	REPLACE Statements per Second	Number of REPLACE statements executed per second	≥0 Statements/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance

Metric	Name	Description	Value Range	Remarks
gaussdb_mysql032_comdml_rep_sel_count	REPLACE_STATEMENT Statement s per Second	Number of REPLACE_STATEMENT statements executed per second	≥0 Statements/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql033_comdml_sel_count	SELECT Statement s per Second	Number of SELECT statements executed per second	≥0 Statements/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql034_comdml_upd_count	UPDATE Statement s per Second	Number of UPDATE statements executed per second	≥0 Statements/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql035_innodb_delete_row_count	Row Delete Frequency	Number of rows deleted from the InnoDB table per second	≥0 Rows/s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql036_innodb_insert_row_count	Row Insert Frequency	Number of rows inserted into the InnoDB table per second	≥0 Rows/s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql037_innodb_read_row_count	Row Read Frequency	Number of rows read from the InnoDB table per second	≥0 Rows/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance

Metric	Name	Description	Value Range	Remarks
gaussdb_mysql038_innodb_upd_row_count	Row Update Frequency	Number of rows updated into the InnoDB table per second	≥0 Rows/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql048_disk_used_size	Used Storage Space	Used storage space of the monitored object	0 GB-128 TB	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql072_conn_usage	Connection Usage	Percent of used MySQL connections to the total number of connections	0-100%	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql074_slow_queries	Slow Query Logs	Number of MySQL slow query logs generated per minute	≥0 Queries/min	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql077_replication_delay	Replication Delay	Data replication delay between the primary node and read replicas	≥ 0s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql104_dfv_write_delay	Storage Write Latency	Average latency of writing data to the storage layer in a specified period	≥0 ms	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance

Metric	Name	Description	Value Range	Remarks
gaussdb_mysql105_dfv_read_delay	Storage Read Latency	Average latency of reading data from the storage layer in a specified period	≥0 ms	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql106_innodb_row_lock_current_waits	InnoDB Row Locks	Number of row locks being waited by operations on the InnoDB table	≥0 Locks	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql107_comdml_ins_and_ins_sel_count	INSERT and INSERT_SELECT Statements per Second	Number of INSERT and INSERT_SELECT statements executed per second	≥0 Statements/s	Monitored object: ECS Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql108_com_commit_count	COMMIT Statements per Second	Number of COMMIT statements executed per second	≥0 Statements/s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql109_com_rollback_count	ROLLBACK Statements per Second	Number of ROLLBACK statements executed per second	≥0 Statements/s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql110_innodb_bufpool_reads	InnoDB Storage Layer Read Requests per Second	Number of times that InnoDB reads data from the storage layer per second	≥0 Times/s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance

Metric	Name	Description	Value Range	Remarks
gaussdb_mysql111_innodb_bufpool_read_requests	InnoDB Read Requests per Second	Number of InnoDB read requests per second	≥0 Requests/s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql114_innodb_bufpool_read_ahead	InnoDB Bufpool Read Ahead	Number of pages read into the InnoDB buffer pool by the read-ahead background thread	≥0 Pages	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql115_innodb_bufpool_read_ahead_evicted	InnoDB Bufpool Read Ahead Evicted	Number of pages read into the InnoDB buffer pool by the read-ahead background thread that were subsequently evicted without having been accessed by queries	≥0 Pages	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql116_innodb_bufpool_read_ahead_rnd	InnoDB Bufpool Read Ahead Rnd	Number of random read-aheads initiated by InnoDB	≥0 Read-aheads	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql117_innodb_pages_read	InnoDB Pages Read	Number of pages read from the InnoDB buffer pool by operations on InnoDB tables	≥0 Pages	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance

Metric	Name	Description	Value Range	Remarks
gaussdb_mysql118_innodb_pages_written	InnoDB Pages Written	Number of pages written by operations on InnoDB tables	≥0 Pages	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql019_innodb_log_writes	InnoDB Log Writes	Number of physical writes to the InnoDB redo log file	≥0 Writes	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql342_iostat_iops_write	I/O Write IOPS	Number of disk writes per second	≥0 Operations/s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql344_iostat_iops_read	I/O Read IOPS	Number of disk reads per second	≥0 Operations/s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql346_iostat_throughput_write	I/O Write Bandwidth	Disk write bandwidth per second	≥0 Bytes/s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance
gaussdb_mysql348_iostat_throughput_read	I/O Read Bandwidth	Disk read bandwidth per second	≥0 Bytes/s	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance

Metric	Name	Description	Value Range	Remarks
gaussdb_mysql119_disk_usage_ratio	Disk Usage	Disk usage of the monitored object	0-100%	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance 1 minute
gaussdb_mysql371_taurus_binlog_total_file_counts	Binlog Files	Number of GaussDB(for MySQL) binlog files	≥0	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance 5 minutes
gaussdb_mysql378_create_temp_tbl_per_min	Temporary Tables Created per Minute	Number of temporary tables automatically created on disks per minute when GaussDB(for MySQL) statements are executed	≥0 counts/min	Monitored object: database Monitored instance type: GaussDB(for MySQL) instance 1 minute

Dimension

Key	Value
gaussdb_mysql_instance_id	GaussDB(for MySQL) instance ID.
gaussdb_mysql_node_id	Node ID of the GaussDB(for MySQL) instance.

A Change History

Released On	Description
2023-05-30	Modified the following content: <ul style="list-style-type: none">• Added the restore_point parameter in Creating a DB Instance.• Added Restoring Data to the Original Instance or an Existing Instance.• Added Querying the Restoration Time Range.
2023-03-15	This issue is the first official release.