

# Alibaba Cloud AnalyticDB for PostgreSQL

## API Reference

Issue: 20190514

# Legal disclaimer

---

Alibaba Cloud reminds you to carefully read and fully understand the terms and conditions of this legal disclaimer before you read or use this document. If you have read or used this document, it shall be deemed as your total acceptance of this legal disclaimer.

1. You shall download and obtain this document from the Alibaba Cloud website or other Alibaba Cloud-authorized channels, and use this document for your own legal business activities only. The content of this document is considered confidential information of Alibaba Cloud. You shall strictly abide by the confidentiality obligations. No part of this document shall be disclosed or provided to any third party for use without the prior written consent of Alibaba Cloud.
2. No part of this document shall be excerpted, translated, reproduced, transmitted, or disseminated by any organization, company, or individual in any form or by any means without the prior written consent of Alibaba Cloud.
3. The content of this document may be changed due to product version upgrades, adjustments, or other reasons. Alibaba Cloud reserves the right to modify the content of this document without notice and the updated versions of this document will be occasionally released through Alibaba Cloud-authorized channels. You shall pay attention to the version changes of this document as they occur and download and obtain the most up-to-date version of this document from Alibaba Cloud-authorized channels.
4. This document serves only as a reference guide for your use of Alibaba Cloud products and services. Alibaba Cloud provides the document in the context that Alibaba Cloud products and services are provided on an "as is", "with all faults" and "as available" basis. Alibaba Cloud makes every effort to provide relevant operational guidance based on existing technologies. However, Alibaba Cloud hereby makes a clear statement that it in no way guarantees the accuracy, integrity, applicability, and reliability of the content of this document, either explicitly or implicitly. Alibaba Cloud shall not bear any liability for any errors or financial losses incurred by any organizations, companies, or individuals arising from their download, use, or trust in this document. Alibaba Cloud shall not, under any circumstances, bear responsibility for any indirect, consequential, exemplary, incidental, special, or punitive damages, including lost profits arising from the use

or trust in this document, even if Alibaba Cloud has been notified of the possibility of such a loss.

5. By law, all the content of the Alibaba Cloud website, including but not limited to works, products, images, archives, information, materials, website architecture, website graphic layout, and webpage design, are intellectual property of Alibaba Cloud and/or its affiliates. This intellectual property includes, but is not limited to, trademark rights, patent rights, copyrights, and trade secrets. No part of the Alibaba Cloud website, product programs, or content shall be used, modified, reproduced, publicly transmitted, changed, disseminated, distributed, or published without the prior written consent of Alibaba Cloud and/or its affiliates. The names owned by Alibaba Cloud shall not be used, published, or reproduced for marketing, advertising, promotion, or other purposes without the prior written consent of Alibaba Cloud. The names owned by Alibaba Cloud include, but are not limited to, "Alibaba Cloud", "Aliyun", "HiChina", and other brands of Alibaba Cloud and/or its affiliates, which appear separately or in combination, as well as the auxiliary signs and patterns of the preceding brands, or anything similar to the company names, trade names, trademarks, product or service names, domain names, patterns, logos, marks, signs, or special descriptions that third parties identify as Alibaba Cloud and/or its affiliates).
6. Please contact Alibaba Cloud directly if you discover any errors in this document.



## Generic conventions

Table -1: Style conventions

Style	Description	Example
	This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 <b>Danger:</b> Resetting will result in the loss of user configuration data.
	This warning information indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 <b>Warning:</b> Restarting will cause business interruption. About 10 minutes are required to restore business.
	This indicates warning information, supplementary instructions, and other content that the user must understand.	 <b>Notice:</b> Take the necessary precautions to save exported data containing sensitive information.
	This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.	 <b>Note:</b> You can use Ctrl + A to select all files.
>	Multi-level menu cascade.	Settings > Network > Set network type
<b>Bold</b>	It is used for buttons, menus, page names, and other UI elements.	Click <b>OK</b> .
Courier font	It is used for commands.	Run the <code>cd / d C :/ windows</code> command to enter the Windows system folder.
<i>Italics</i>	It is used for parameters and variables.	<code>bae log list --instanceid <i>Instance_ID</i></code>
[ ] or [a b]	It indicates that it is an optional value, and only one item can be selected.	<code>ipconfig [-all -t]</code>

Style	Description	Example
<code>{}</code> or <code>{a b}</code>	It indicates that it is a required value, and only one item can be selected.	<code>swich {stand   slave}</code>



# Contents

---

Legal disclaimer.....	I
Generic conventions.....	I
1 API Overview.....	1
2 Request structure.....	3
3 Common parameters.....	4
4 Responses.....	6
5 Sign signatures.....	8
6 Use RAM for resource authorization.....	12
6.1 Use RAM for resource authorization.....	12
6.2 Authorized resource type through RAM.....	12
6.3 Actions of authorized resources.....	13
6.4 Authentication rules for APIs.....	13
7 Instance management.....	16
7.1 CreateDBInstance.....	16
7.2 DeleteDBInstance.....	19
7.3 DescribeDBInstanceAttribute.....	20
7.4 DescribeDBInstances.....	25
7.5 DescribeRegions.....	34
7.6 DescribeResourceUsage.....	41
7.7 ModifyDBInstanceConnectionMode.....	43
7.8 ModifyDBInstanceDescription.....	44
7.9 ModifyDBInstanceMaintainTime.....	45
7.10 RestartDBInstance.....	47
7.11 DescribeDBInstancePerformance.....	48
8 Database management.....	55
8.1 DeleteDatabase.....	55
9 Account management.....	57
9.1 CreateAccount.....	57
9.2 DescribeAccounts.....	58
9.3 ModifyAccountDescription.....	60
9.4 ResetAccountPassword.....	63
10 Security management.....	65
10.1 DescribeDBInstanceIPArrayList.....	65
10.2 ModifySecurityIps.....	67
11 Log management.....	70
11.1 DescribeSQLLogFiles.....	70
11.2 DescribeSQLLogRecords.....	72



<b>12 Network management</b> .....	<b>76</b>
12.1 AllocateInstancePublicConnection.....	76
12.2 DescribeDBInstanceNetInfo.....	77
12.3 ModifyDBInstanceConnectionString.....	79
12.4 ModifyDBInstanceNetworkType.....	80
12.5 ReleaseInstancePublicConnection.....	82
<b>13 Appendix</b> .....	<b>84</b>
13.1 Error codes.....	84
13.1.1 Client error codes.....	84
13.1.2 Server error codes.....	93
13.2 Instance types.....	93
13.3 Performance parameters.....	94
13.4 Instance statuses.....	95



# 1 API Overview

---

Table 1-1: Instance management

API	Description
<a href="#">CreateDBInstance</a>	Creates a database instance.
<a href="#">DeleteDBInstance</a>	Deletes a database instance.
<a href="#">DescribeDBInstanceAttribute</a>	Lists all attributes of the database instance.
<a href="#">DescribeDBInstances</a>	Returns a list of database instances.
<a href="#">DescribeRegions</a>	Returns a list of available regions and zones.
<a href="#">DescribeResourceUsage</a>	Returns the resource utilization data of the database instance.
<a href="#">ModifyDBInstanceConnectionMode</a>	Modifies the connection mode of the database instance.
<a href="#">ModifyDBInstanceDescription</a>	Modifies the description of the database instance.
<a href="#">ModifyDBInstanceMaintainTime</a>	Modifies the maintenance period of the database instance.
<a href="#">RestartDBInstance</a>	Restart the database instance.
<a href="#">DescribeDBInstancePerformance</a>	Returns performance data for the database instance.

Table 1-2: Database management

API	Description
<a href="#">DeleteDatabase</a>	Deletes a database.

Table 1-3: Account management

API	Description
<a href="#">CreateAccount</a>	Creates an account.
<a href="#">DescribeAccounts</a>	Returns the account information for a database.

API	Description
<a href="#">ModifyAccountDescription</a>	Modifies the description of the database.
<a href="#">ResetAccountPassword</a>	Resets the password for an account.

Table 1-4: Security management

API	Description
<a href="#">DescribeDBInstanceIPArrayList</a>	Returns a list of IP addresses that are allowed to access the database instance.
<a href="#">ModifySecurityIps</a>	Modifies the whitelist of IP addresses.

Table 1-5: Log management

API	Description
<a href="#">DescribeSQLLogFiles</a>	Returns a list of SQL audit files.
<a href="#">DescribeSQLLogRecords</a>	Returns a SQL audit log for an instance.

Table 1-6: Network management

API	Description
<a href="#">AllocateInstancePublicConnection</a>	Allocates a public network connection string for an instance.
<a href="#">DescribeDBInstanceNetInfo</a>	Returns the network information for an instance.
<a href="#">ModifyDBInstanceConnectionString</a>	Modifies the connection string and the port.
<a href="#">ModifyDBInstanceNetworkType</a>	Switches the network connection type for an instance.
<a href="#">ReleaseInstancePublicConnection</a>	Releases the public connection string for an instance.

## 2 Request structure

---

To make an API call, send an HTTP GET request to the OpenAPI endpoint with request parameters according to the description of the corresponding API operation. The processing results are returned in the response.

### Endpoints

The endpoint of this API is `gpdb.aliyuncs.com`.

### Protocols

You can send HTTP and HTTPS requests. We recommend that you send HTTPS requests for better security. Some password-related APIs only support HTTPS.

### Methods

You can send requests using the HTTP GET method. In an HTTP GET request, parameters are included as part of the URL.

### Parameters

Specify the Action parameter, for example, `CreateDBInstance`. Additionally, specify the common request parameters that are applicable for all operations and operation-specific parameters that are applicable only for this operation.

### Encoding

Requests and responses are encoded using the UTF-8 character set.

## 3 Common parameters

### Common request parameters

Common request parameters refer to the request parameters that each API requires.

Table 3-1: Common request parameters

Name	Type	Required	Description
Format	String	No	The format of the returned value. Values: JSON and XML. The default format is XML.
Version	String	Yes	The version of the API, in the format of YYYY-MM-DD. The current version is 2014-08-15.
AccessKeyId	String	Yes	The Key ID provided by Alibaba Cloud for you to access services.
Signature	String	Yes	The result string of the signature. For more information about how to calculate a signature, see <a href="#">Sign signatures</a> .
SignatureMethod	String	Yes	The method of the signature. HMAC-SHA1 is supported currently.
Timestamp	String	Yes	The timestamp of the request. The format of the date follows the <a href="#">ISO8601</a> standard and uses UTC time. The format is as follows:  <div style="background-color: #f0f0f0; padding: 5px; margin: 5px 0;">           YYYY - MM - DDThh : mm : ssZ         </div> For example, 2013-08-15T12:00:00Z indicates 20:00:00, Jan 10, 2013, Beijing time.
SignatureVersion	String	Yes	The algorithm version of the signature. The current version is 1.0.
SignatureNonce	String	Yes	The unique random number that is used to prevent network replay attacks. You must use different random numbers for the requests.

### Examples

```
https://gpdb.aliyuncs.com/
```

```
? Format = xml
& Version = 2013 - 08 - 15
& Signature = Pc5WB8gokV n0xfeu % 2FZV % 2BiNM1dgI % 3D
& SignatureMethod = HMAC - SHA1
& SignatureNonce = 1521552885 2396
& SignatureVersion = 1 . 0
& AccessKeyId = key - test
& Timestamp = 2013 - 06 - 01T12 : 00 : 00Z
```

### Common response parameters

Each time you make a call to an API, the system returns a unique identification code (**RequestId**), regardless whether the request is successful.

#### Example:

```
<? xml version="1.0" encoding="utf-8" ? >
<!-- Result root node -->
< API name + Response >
  <!-- Return request tag -->
  < RequestId > 4C467B38 - 3910 - 447D - 87BC - AC049166F2 16 </
  RequestId >
  <!-- Return result data -->
</ API name + Response >
```

## 4 Responses

---

After the API is called, the data is returned in the same format. A returned HTTP status code of 2xx indicates that the call has been successful. A returned HTTP status code of 4xx indicates that the call has failed.

Successful responses are returned in XML or JSON format. You can pass a parameter to specify the response format when you call the API from an external system. The default format is XML. The examples of returned results in this topic are formatted for ease of reading. The actual returned results are not formatted with line breaks, indentation, or other layouts.

### Successful response examples

#### XML format

The XML response contains information on whether the request is successful and the specific service data. The example is as follows.

```
<? xml version = " 1 . 0 " encoding = " utf - 8 " ? >
<!-- Result root node -->
< API name + Response >
  <!-- Returned request tag -->
  < RequestId > 4C467B38 - 3910 - 447D - 87BC - AC049166F2 16 </
  RequestId >
  <!-- Returned results -->
</ API name + Response >
```

#### JSON format

```
{
  " RequestId ": " 4C467B38 - 3910 - 447D - 87BC - AC049166F2 16
",
  /* Returned results */
}
```

### Error response examples

If the API call fails, no data is returned. To identify the cause of an error, you can see the appendix [Error codes](#).

When the call fails, an HTTP status code of 4xx or 5xx is returned. The response body contains the error code and the error message. It also contains the GUID "RequestId" and the requested "HostId." If you cannot find the cause of the error, contact Alibaba Cloud Customer Service and provide the HostId and RequestId, so that we can solve your problem as soon as possible.



## XML format

```
<? xml version = " 1 . 0 " encoding = " UTF - 8 "? >
< Error >
  < RequestId > 8906582E - 6722 - 409A - A6C4 - 0E7863B733 A5 </
  RequestId >
  < HostId > gpdb . aliyuncs . com </ HostId >
  < Code > InvalidAct ion </ Code >
  < Message > The specified action is not supported . </
  Message >
</ Error >
```

## JSON format

```
{
  " RequestId ": " 7463B73D - 35CC - 4D19 - A010 - 6B8D65D242 EF
",
  " HostId ": " gpdb . aliyuncs . com ",
  " Code ": " InvalidAct ion ",
  " Message ": " The specified action is not valid ."
}
```

## 5 Sign signatures

---

The AnalyticDB for PostgreSQL service performs identity authentication on each access request. Therefore, whether submitted through HTTP or HTTPS, a request must contain signature information. AnalyticDB for PostgreSQL uses symmetric encryption based on an Access Key ID and Access Key Secret to verify the identity of request senders. The Access Key ID and Access Key Secret are issued to users by Alibaba Cloud (users can request and manage keys on the website of Alibaba Cloud ). The Access Key ID indicates the identity of the user. The Access Key Secret is the secret key used to encrypt the signature string and to verify the signature string on the server. It must be kept strictly confidential and only be known to Alibaba Cloud and authenticated users.

Follow the instructions below to sign the signatures for your requests.

1. Use request parameters to construct a Canonicalized Query String.
  - a. Sort all request parameters (including "Common request parameters" and user-defined parameters for the given request interfaces described in this document, excluding the Signature parameter mentioned in "Common request parameters") alphabetically by the parameter name.



Note:

If you use the GET method to submit requests, these parameters are included in the request URI that is the part after the question mark “?” following the ampersand “&” in the URI.

- b. Encode the name and value of each request parameter. The names and values must undergo URL encoding using the UTF-8 character set. The URL encoding rules are as follows:
  - Uppercase letters (A–Z), lowercase letters (a–z), numbers (0–9), hyphens (-), underscores (\_), periods (.), and tildes (~) are not encoded.
  - Other characters are encoded in "%XY" format, with XY representing the character ASCII code in hexadecimal notation. The double quotation mark (") is coded as %22.
  - Extended UTF-8 characters are encoded in “%XY%ZA…”
  - It must be noted that an English space is encoded as %20, rather than the plus sign (+).



**Note:**

Generally, URL encoding libraries (such as “java.net.URLEncoder” in Java) perform encoding based on rules of the MIME type in the “application/x-www-form-urlencoded” format. You can use this encoding method directly by replacing the plus sign (+) in the encoded string with "%20", the asterisk (\*) with "%2A", and change "%7E" back to the tilde (~) to conform to the encoding rules described above .

- c. Connect the encoded parameter names and values with equal signs (=).
  - d. Then, sort the parameter name and value pairs connected by equal signs in alphabetical order, and connect them with an ampersand (&) to produce the canonicalized query string.
2. Follow the rules below to use the canonicalized query string to construct the string for signature calculation:

```
StringToSi gn = HTTPMethod + "&" + percentEnc ode ("/") + "&"
+ percentEnc ode ( Canonicali zedQuerySt ring )
```

In this formulation, HTTPMethod is the HTTP method (such as GET) used for request submission.

percentEncode( “/ “): the coded value for the character “/ “ according to the URL encoding rules described in 1.b, namely, “%2F” .

“percentEncode( “/ “)” is the encoded value (namely, “%2F” ) for the character “/ “ according to the URL encoding rules described in 1.b.

- Use the string for signature calculation to calculate the HMAC value of the signature based on [RFC2104](#).



Note:

Note: The key used for calculating the signature is the AccessKey NOTE: The key used for signature calculation is your secret access key adding the ampersand “&” (ASCII:38) and it is based on the SHA1 hashing algorithm.

- Encode the HMAC value into a string based on Base64 encoding rules to obtain the signature value.
- Add the obtained signature value to request parameters as the Signature parameter to complete the request signing process.



Note:

NOTE: The obtained signature value requires URL encoding based on the [RFC3986](#) rule like other parameters before it is submitted to the GPDB server as the final request parameter value. Take "DescribeDBInstances" as an example, the request URL before a signature is:

```
http://gpdb.aliyuncs.com/?Timestamp=2013-06-01T10:33:56Z&Format=XML&AccessKeyId=testid&Action=DescribeDBInstances&SignatureMethod=HMAC-SHA1&RegionId=region1&SignatureNonce=NwDaxvLU6tFE0DVb&Version=2014-08-15&SignatureVersion=1.0
```

The corresponding "StringToSign" is:

```
GET %2F & AccessKeyId %3Dtestid %26Action % DescribeDBInstances % 26Format % 3DXML % 26RegionId % 3Dregion1 % 26SignatureMethod % 3DHMAC - SHA1 % 26SignatureNonce % 3DNwDaxvLU6tFE0DVb % 26SignatureVersion % 3D1 . 0 % 26Timestamp
```

```
% 3D2013 - 06 - 01T10 % 253 A33 % 253A56Z % 26Version % 3D2014 -
08 - 15
```

Assume that the value of the Access Key ID parameter value is "testid," the value of the Access Key Secret parameter is "testsecret." Then the key used for HMAC calculation is "testsecret&," and the calculated signature value is :

GfQRtWbwdE8sp7q9lBgZyutVht8=

The signed request URL is (with the Signature parameter added):

```
http :// gpdb . aliyuncs . com /? Timestamp = 2012 - 12 - 26T10
% 3A33 % 3A56Z & Format = XML & AccessKeyI d = testid & Action
= DescribeDB Instances & SignatureM ethod = HMAC - SHA1 &
RegionId = region1 & SignatureN once = NwDaxvLU6t FE0DVb
& Version = 2012 - 09 - 13 & Sign atureVersi on = 1 . 0 &
Signature = GfQRtWbwdE 8sp7q9lBgZ yutVht8 % 3d
```

## 6 Use RAM for resource authorization

### 6.1 Use RAM for resource authorization

The instances you create through your Alibaba Cloud account are the resources owned by the account. By default, an account has full access to its own resources.

By using Resource Access Management (RAM), you can grant access to resources owned by the Alibaba Cloud account to RAM users.



**Note:**

If you do not need to use RAM, skip this procedure.

### 6.2 Authorized resource type through RAM

Currently, RAM only supports authorizing DBInstance.

The description of resources to be authorized through RAM is as follows.

Table 6-1: Resource description

Resource type	Description in authorization policy
DBInstance	acs:gpdb:\$regionid: \$accountid:dbinstance/\$dbinstance id acs:gpdb:\$regionid:\$accountid:dbinstance/* acs:gpdb:* : *:dbinstance/*



**Note:**

- The value of \$regionid should be the id of a region or a "\*".
- The value of \$dbinstanceid should be the id of a DBInstance or an asterisk (\*).
- The value of \$accoutid should be the userid of the resource owner or a "\*".

## 6.3 Actions of authorized resources

You can use RAM to authorize the resources of a AnalyticDB for PostgreSQL instance and specify the Action parameter with any available value (except for the DescribeRegions value).

## 6.4 Authentication rules for APIs

When you use APIs to access resources as a RAM user, AnalyticDB for PostgreSQL checks whether the RAM user is granted the required permissions by querying Resource Access Management (RAM).

When you access cross-account resources by using APIs, AnalyticDB for PostgreSQL checks whether you are granted the required permissions to access these resources by querying RAM. The permissions to be checked are determined by the resources used by an API and the API operation. For more information about authentication rules for each API, see [Table 6-2: Authentication rules for APIs](#).

Table 6-2: Authentication rules for APIs

Action	Authentication rule
CreateDBInstance	acs:gpdb:\$regionid: dbinstance /\$*
DeleteDBInstance	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DescribeDBInstanceAttribute	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DescribeDBInstances	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DescribeRegions	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DescribeResourceUsage	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
ModifyDBInstanceConnectionMode	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
ModifyDBInstanceDescription	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid

Action	Authentication rule
ModifyDBInstanceMaintainTime	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
RestartDBInstance	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DeleteDatabase	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DescribeAccounts	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
ModifyAccountDescription	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
CreateAccount	acs:gpdb:\$regionid: dbinstance /\$*
ResetAccountPassword	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DescribeDBInstanceIPArrayList	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DescribeDBClusterIPArrayList	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
ModifySecurityIps	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DescribeSlowLogRecords	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DescribeSQLCollectorPolicy	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DescribeSQLLogFiles	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DescribeSQLLogRecords	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
ModifySQLCollectorPolicy	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DescribeDBInstancePerformance	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
AllocateInstancePublicConnection	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
DescribeDBInstanceNetInfo	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid



Action	Authentication rule
ReleaseClusterPublicConnection	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
ModifyDBInstanceConnectionString	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
ModifyDBInstanceNetworkType	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid
ReleaseInstancePublicConnection	acs:gpdb:\$regionid: \$accountid: dbinstance/\$dbinstanceid

# 7 Instance management

---

## 7.1 CreateDBInstance

### Description

You can call this operation to create an instance of AnalyticDB for PostgreSQL.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to CreateDBInstance.
RegionId	String	Yes	The ID of a region, such as cn-hangzhou. For more information about available regions, see DescribeRegions.
ZoneId	String	Yes	The ID of a zone, such as cn-hangzhou-d. For more information about available zones, see DescribeRegions.
Engine	String	Yes	The Engine of the database, and the value is gpdb.
EngineVersion	String	Yes	The version of engine, and the value is 4.3.

Name	Type	Required	Description
PayType	String	No	The billing methods: <ul style="list-style-type: none"> <li>· Postpaid: Pay-As-You-Go. The default value is Postpaid.</li> <li>· Prepaid: Subscription.</li> </ul>
InstanceNetworkType	String	Yes	The network type of an instance. Valid values: Classic and VPC. Default value: Classic.
VPCId	String	No	When you specify VPC for InstanceNetworkType, you must specify VPCId. The region of the VPC must be the same as that specified by RegionID.
VSwitchId	String	No	When you specify VPC for InstanceNetworkType, you must specify VSwitchId. The zone of the VSwitch must be the same as that specified by ZoneId.
DBInstanceClass	String	Yes	The type of a group. For more information, see <a href="#">Instance types</a> .
DBInstanceGroupCount	String	Yes	The number of groups.

Name	Type	Required	Description
DBInstanceDescription	String	No	The description of the instance. The maximum length is 256 characters.
SecurityIPList	String	No	The whitelist. Default value: 127.0.0.1.
ClientToken	String	Yes	The idempotence check.

### Response parameters

Name	Type	Description
<Common response parameters>	String	For more information, see <a href="#">Common response parameters</a>
DBInstanceId	String	The instance ID.
OrderId	String	The order ID.

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=CreateDBInstance
&Engine=gpdb
&EngineVersion=4.3
&RegionId=cn-hangzhou
&ZoneId=cn-hangzhou-b
&PayType=Postpaid
&InstanceNetworkType=Classic
&DBInstanceClass=gpdb.group.segsdx1
&DBInstanceGroupCount=2
&ClientToken=f918f59c-89be-42ee-bb86-d027243b2c-fb
&<Common request parameters>
```

### Sample responses

#### XML format

```
<CreateDBInstanceResponse>
  <dbInstanceId>gp-xxxxxx</dbInstanceId>
  <orderId>202292238780941</orderId>
</CreateDBInstanceResponse>
```

#### JSON format

```
{
  "dbInstanceId": "gp-xxxxxx",
  "orderId": "202292238780941"
}
```

```
}

```

## 7.2 DeleteDBInstance

### Description

You can call this operation to delete an instance.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to DeleteDBInstance.
DBInstanceId	String	Yes	The instance ID.

### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=DeleteDBInstance
&DBInstanceId=gp-xxxxxxx
&<Common request parameters>
```

### Sample responses

#### XML format

```
<DeleteDBInstanceResponse>
  <RequestId>65BDA532-28AF-4122-AA39-B382721EEE64</
  RequestId>
```

```
</ DeleteDBInstanceResponse >
```

### JSON format

```
"RequestId": "65BDA532 - 28AF - 4122 - AA39 - B382721EEE 64"
```

## 7.3 DescribeDBInstanceAttribute

### Description

You can call this operation to query the details of an instance.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to DescribeDBInstanceAttribute.
DBInstanceId	String	Yes	The instance ID.

### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .
Items	List<DBInstanceAttribute>	The list of instance details.

Table 7-1: DBInstanceAttribute parameters

Name	Type	Description
AvailabilityValue	String	The service availability of the current instance. Unit: percentage.

Name	Type	Description
ConnectionMode	String	<ul style="list-style-type: none"> <li>· <b>Performance:</b> standard connection mode</li> <li>· <b>Safty:</b> safe connection mode</li> </ul>
ConnectionString	String	The connection string that you can use to connect to a database.
CreationTime	String	The time when you create an instance. The format is <code>YYYY - MM - DDThh : mm : ssZ</code> , such as <code>2011-05-30T12:11:4Z</code> .
DBInstanceClass	String	The group type.
DBInstanceClassType	String	The group type families: <ul style="list-style-type: none"> <li>· <b>s:</b> shared instances</li> <li>· <b>x:</b> general instances</li> <li>· <b>d:</b> dedicated instances</li> <li>· <b>h:</b> dedicated hosts (DDH )</li> </ul>
DBInstanceCpuCores	String	The number of vCPU cores .
DBInstanceDescription	String	The description of an instance.
DBInstanceDiskMBPS	Long	The maximum disk throughput of a group. Unit: Mbps.
DBInstanceGroupCount	String	The number of groups.
DBInstanceId	String	The instance ID.
DBInstanceMemory	Long	The memory capacity of a group. Unit: MB.
DBInstanceNetType	String	<ul style="list-style-type: none"> <li>· <b>Internet:</b> the Internet</li> <li>· <b>Intranet:</b> a private network</li> </ul>

Name	Type	Description
DBInstanceStatus	String	For more information about the instance status, see <a href="#">Instance statuses</a> .
DBInstanceStorage	Long	Disk space of an instance. Unit: GB.
Engine	String	<ul style="list-style-type: none"> <li>· Internet: the Internet</li> <li>· Intranet: a private network</li> </ul>
EngineVersion	String	The version of a database.
ExpireTime	String	The expiration time of the instance.
HostType	String	<p>The disk type of a group.</p> <ul style="list-style-type: none"> <li>· 0: SSD</li> <li>· 1: SATA</li> <li>·</li> </ul>
InstanceNetworkType	String	<ul style="list-style-type: none"> <li>· Classic: classic networks</li> <li>·</li> <li>· VPC: VPC networks.</li> </ul>
LockMode	String	<ul style="list-style-type: none"> <li>· Unlock: in normal operation</li> <li>· ManualLock: locked manually</li> <li>· LockByExpiration: locked automatically after the instance expires</li> <li>· LockByRestoration: locked automatically before a rollback</li> <li>· LockByDiskQuota: locked automatically after the instance space is full</li> </ul>
MaintainEndTime	String	The end time of instance maintenance.



Name	Type	Description
MaintainStartTime	String	The start time of instance maintenance.
MaxConnections	Integer	The maximum number of concurrent connections to an instance.
PayType	String	The billing methods: <ul style="list-style-type: none"> <li>Postpaid: Pay-As-You-Go</li> <li>Prepaid: Subscription</li> </ul>
Port	String	The port number that you can use to connect to an instance.
RegionId	String	The name of a region.
SecurityIPList	String	The whitelist of IP addresses that are allowed to access the instance.
VpcId	String	The name of a VPC.
ZoneId	String	The name of a zone.

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=DescribeDBInstanceAttribute
&DBInstanceId=gp-xxxxxxx
&<CommonRequestParameter>
```

### Sample responses

#### XML format

```
<DescribeDBInstanceAttributeResponse>
  <RequestId>B4CAF581-2AC7-41AD-8940-D56DF7AADF5B</RequestId>
  <Items>
    <DBInstanceAttribute>
      <DBInstanceDiskMBPS>300</DBInstanceDiskMBPS>
      <ConnectionString>gp-xxxxxxx.rds.aliyuncs.com</ConnectionString>
      <ZoneId>cn-hangzhou-e</ZoneId>
      <ConnectionMode>Performance</ConnectionMode>
      <VpcId>vpc-xxxxxxx</VpcId>
      <Engine>gpdb</Engine>
      <MaxConnections>500</MaxConnections>
      <MaintainStartTime>18:00Z</MaintainStartTime>
      <DBInstanceGroupCount>2</DBInstanceGroupCount>
      <HostType>0</HostType>
      <DBInstanceMemory>16384</DBInstanceMemory>
```

```

< EngineVers ion > 4 . 3 </ EngineVers ion >
< DBInstance Status > Running </ DBInstance Status >
< PayType > Prepaid </ PayType >
< LockMode > Unlock </ LockMode >
< DBInstance NetType > 1 </ DBInstance NetType >
< MaintainEn dTime > 22 : 00Z </ MaintainEn dTime >
< DBInstance Class > gpdb . group . segsdx2 </ DBInstance Class >
< DBInstance Id > gp - xxxxxxxx </ DBInstance Id >
< DBInstance ClassType > x </ DBInstance ClassType >
< InstanceNe tworkType > Classic </ InstanceNe tworkType >
< DBInstance Descriptio n > gp - xxxxxxxx </ DBInstance
Descriptio n >
< DBInstance Storage > 160 </ DBInstance Storage >
< CreationTi me > 2018 - 06 - 27T12 : 07 : 10Z </ CreationTi me >
< Port > 3432 </ Port >
< ExpireTime > 2019 - 06 - 27T16 : 00 : 00Z </ ExpireTime >
< RegionId > cn - hangzhou </ RegionId >
< Availabili tyValue > 100 . 0 %</ Availabili tyValue >
< DBInstance CpuCores > 2 </ DBInstance CpuCores >
< SecurityIP List > 127 . 0 . 0 . 1 </ SecurityIP List >
</ DBInstance Attribute >
</ Items >
</ DescribeDB InstanceAt tributeRes ponse >

```

## JSON format

```

{
  " Items " : {
    " DBInstance Attribute " : [
      {
        " DBInstance DiskMBPS " : 300 ,
        " Connection String " : " gp - xxxxxxxx . gpdb . rds .
aliyuncs . com ",
        " ZoneId " : " cn - hangzhou - e ",
        " Connection Mode " : " Performanc e ",
        " VpcId " : " vpc - xxxxxxxx ",
        " Engine " : " gpdb ",
        " MaxConnect ions " : 500 ,
        " MaintainSt artTime " : " 18 : 00Z ",
        " DBInstance GroupCount " : " 2 ",
        " HostType " : " 0 ",
        " DBInstance Memory " : 16384 ,
        " EngineVers ion " : " 4 . 3 ",
        " DBInstance Status " : " Running ",
        " PayType " : " Prepaid ",
        " LockMode " : " Unlock ",
        " DBInstance NetType " : " 1 ",
        " MaintainEn dTime " : " 22 : 00Z ",
        " DBInstance Class " : " gpdb . group . segsdx2 ",
        " DBInstance Id " : " gp - xxxxxxxx ",
        " DBInstance ClassType " : " x ",
        " InstanceNe tworkType " : " Classic ",
        " DBInstance Descriptio n " : " gp - xxxxxxxx ",
        " DBInstance Storage " : 160 ,
        " CreationTi me " : " 2018 - 06 - 27T12 : 07 : 10Z ",
        " Port " : " 3432 ",
        " ExpireTime " : " 2014 - 10 - 10T16 : 00 : 00Z ",
        " RegionId " : " cn - hangzhou ",
        " Availabili tyValue " : " 100 . 0 %",
        " DBInstance CpuCores " : 2 ,
        " SecurityIP List " : " 127 . 0 . 0 . 1 "
      }
    ]
  }
}

```

```

    },
    "RequestId ":" B4CAF581 - 2AC7 - 41AD - 8940 - D56DF7AADF 5B "
  }

```

## 7.4 DescribeDBInstances

### Description

You can call this operation to query the list of instances.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to DescribeDBInstances.
RegionId	String	Yes	The name of the region. You can use DescribeRegions to check available regions.
Engine	String	No	The database type . Default value: PostgreSQL.

Name	Type	Required	Description
<b>DBInstanceType</b>	String	No	The instance type. Valid values: <ul style="list-style-type: none"> <li>• <b>Primary:</b> primary instances.</li> <li>• <b>Readonly:</b> read-only instances.</li> <li>• <b>Guard:</b> disaster recovery instances.</li> <li>• <b>Temp:</b> temporary instances.</li> <li>• If you do not specify this parameter, instances of all types will be returned.</li> </ul>
<b>DBInstanceDescription</b>	String	No	The description of the instance.
<b>InstanceNetworkType</b>	String	No	Valid values: <ul style="list-style-type: none"> <li>• <b>VPC:</b> VPC network instances.</li> <li>• <b>Classic:</b> classic network instances.</li> <li>• If you do not specify this parameter, instances of both types will be returned.</li> </ul>

Name	Type	Required	Description
ConnectionMode	String	No	<ul style="list-style-type: none"> <li>· <b>Standard:</b> standard connection mode</li> <li>·</li> <li>· <b>Safe:</b> safe connection mode</li> <li>·</li> <li>· If you do not specify this parameter, instances of both modes will be returned.</li> </ul>
Tags	String	No	The name of the tag that is assigned to an instance. It is a JSON string. This string consists of TagKey and TagValue. You must specify a value for TagKey. TagValue is optional. For example, <code>{" key1": " value1 "}</code> .
PageSize	Integer	No	The number of records on each page. Valid values : 30, 50, and 100. Default value: 30.
PageNumber	Integer	No	The page number . The value of this parameter is greater than zero and up to the maximum value of an integer. Default value: 1.

## Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .
PageNumber	Integer	The number of pages.
TotalRecordCount	Integer	The total number of records.
PageRecordCount	Integer	The number of instances on the current page.
Items	List<DBInstance>	The list of instances.

Table 7-2: The parameters of DBInstance

Name	Type	Description
DBInstanceId	String	The instance name.
DBInstanceDescription	String	The description of an instance.
PayType	String	The billing method: <ul style="list-style-type: none"> <li>· Postpaid: Pay-As-You-Go</li> <li>· Prepaid: Subscription.</li> </ul>
InstanceNetworkType	String	<ul style="list-style-type: none"> <li>· VPC: VPC network instances</li> <li>· Classic: classic network instances</li> </ul>
ConnectionMode	String	<ul style="list-style-type: none"> <li>· Standard: standard connection mode</li> <li>· Safe: safe connection mode</li> </ul>
RegionId	String	The name of the region.
ZoneId	String	zoneId.
ExpireTime	String	The expiration time. Pay-As-You-Go instances never expire.

Name	Type	Description
DBInstanceStatus	String	For more information, see <a href="#">Instance statuses</a> .
Engine	String	The database type.
EngineVersion	String	The version of a database.
DBInstanceNetType	String	<ul style="list-style-type: none"> <li>Internet: a public network</li> <li>Intranet: a private network</li> </ul>
LockMode	String	<ul style="list-style-type: none"> <li>Unlock: a normal state for an instance.</li> <li>ManualLock: An instance is locked manually.</li> <li>LockByExpiration: An instance is locked automatically after the instance expires.</li> <li>LockByRestoration: An instance is locked automatically before a rollback of the instance.</li> <li>LockByDiskQuota: An instance is locked automatically for full disk space.</li> <li>LockReadInstanceByDiskQuota: An instance is read-only for full disk space.</li> </ul>
LockReason	String	The reason for an instance lock.
CreateTime	String	The time when you create an instance.
VPCId	String	The name of a VPC.
VSwitchId	String	The name of a VSwitch.

## Sample requests

```
https://gpdb.aliyuncs.com/?Action=DescribeDBInstances
&RegionId=cn-hangzhou
&<Common request parameters>
```

## Sample responses

### XML format

```
<DescribeDBInstancesResponse>
  <Items>
    <DBInstance>
      <LockMode>Unlock</LockMode>
      <DBInstanceNetType>1</DBInstanceNetType>
      <DBInstanceId>gp-xxxxxxx</DBInstanceId>
      <ZoneId>cn-hangzhou-e</ZoneId>
      <DBInstanceDescription>gpdb_test</DBInstanceDescription>
      <InstanceNetworkType>Classic</InstanceNetworkType>
      <VSwitchId>vsw-xxxxxxx</VSwitchId>
      <VpcId>vpc-xxxxxxx</VpcId>
      <Engine>gpdb</Engine>
      <ExpireTime>2014-10-10T16:00:00Z</ExpireTime>
      <CreateTime>2018-06-27T12:07:11Z</CreateTime>
      <RegionId>cn-hangzhou</RegionId>
      <EngineVersion>4.3</EngineVersion>
      <LockReason></LockReason>
      <DBInstanceStatus>Running</DBInstanceStatus>
      <PayType>Prepaid</PayType>
    </DBInstance>
    <DBInstance>
      <LockMode>Unlock</LockMode>
      <DBInstanceNetType>1</DBInstanceNetType>
      <DBInstanceId>gp-xxxxxxx</DBInstanceId>
      <ZoneId>cn-hangzhou-e</ZoneId>
      <DBInstanceDescription>gp-xxxxxxx</DBInstanceDescription>
      <InstanceNetworkType>Classic</InstanceNetworkType>
      <VSwitchId>vsw-xxxxxxx</VSwitchId>
      <VpcId>vpc-xxxxxxx</VpcId>
      <Engine>gpdb</Engine>
      <ExpireTime>2999-09-08T16:00:00Z</ExpireTime>
      <CreateTime>2018-06-27T11:51:46Z</CreateTime>
      <RegionId>cn-hangzhou</RegionId>
      <EngineVersion>4.3</EngineVersion>
      <LockReason></LockReason>
      <DBInstanceStatus>Running</DBInstanceStatus>
      <PayType>Postpaid</PayType>
    </DBInstance>
    <DBInstance>
      <LockMode>Unlock</LockMode>
      <DBInstanceNetType>2</DBInstanceNetType>
      <DBInstanceId>gp-xxxxxxx</DBInstanceId>
      <ZoneId>cn-hangzhou-e</ZoneId>
      <DBInstanceDescription>test</DBInstanceDescription>
      <InstanceNetworkType>VPC</InstanceNetworkType>
      <VSwitchId>vsw-xxxxxxx</VSwitchId>
      <VpcId>vpc-xxxxxxx</VpcId>
      <Engine>gpdb</Engine>
      <ExpireTime>2014-10-10T16:00:00Z</ExpireTime>
      <CreateTime>2018-06-27T11:46:11Z</CreateTime>
      <RegionId>cn-hangzhou</RegionId>
      <EngineVersion>4.3</EngineVersion>
```



```

    <LockReason></LockReason>
    <DBInstanceStatus>Running</DBInstanceStatus>
    <PayType>Prepaid</PayType>
  </DBInstance>
  <DBInstance>
    <LockMode>Unlock</LockMode>
    <DBInstanceNetType>1</DBInstanceNetType>
    <DBInstanceId>gp-xxxxxxx</DBInstanceId>
    <ZoneId>cn-hangzhou-f</ZoneId>
    <DBInstanceDescription>Test 2</DBInstanceDescription>
    <InstanceNetworkType>Classic</InstanceNetworkType>
    <VSwitchId></VSwitchId>
    <VpcId></VpcId>
    <Engine>gpdb</Engine>
    <ExpireTime>2018-07-20T16:00:00Z</ExpireTime>
    <CreateTime>2018-06-20T05:42:03Z</CreateTime>
    <RegionId>cn-hangzhou</RegionId>
    <EngineVersion>4.3</EngineVersion>
    <LockReason></LockReason>
    <DBInstanceStatus>Running</DBInstanceStatus>
    < PayType > Prepaid </ PayType >
  </DBInstance>
  <DBInstance>
    <LockMode>Unlock</LockMode>
    <DBInstanceNetType>2</DBInstanceNetType>
    <DBInstanceId>gp-xxxxxxx</DBInstanceId>
    <ZoneId>cn-hangzhou-b</ZoneId>
    <DBInstanceDescription>gp-xxxxxxx</DBInstanceDescription>
    <InstanceNetworkType>vpc</InstanceNetworkType>
    <VSwitchId>vsw-xxxxxxx</VSwitchId>
    <VpcId>vpc-xxxxxxx</VpcId>
    <Engine>gpdb</Engine>
    <ExpireTime>2999-09-08T16:00:00Z</ExpireTime>
    <CreateTime>2018-03-14T09:15:21Z</CreateTime>
    <RegionId>cn-hangzhou</RegionId>
    <EngineVersion>5.5</EngineVersion>
    <LockReason></LockReason>
    <DBInstanceStatus>Running</DBInstanceStatus>
    <PayType>Postpaid</PayType>
  </DBInstance>
  <DBInstance>
    <LockMode>Unlock</LockMode>
    <DBInstanceNetType>2</DBInstanceNetType>
    <DBInstanceId>gp-xxxxxxx</DBInstanceId>
    <ZoneId>cn-hangzhou-d</ZoneId>
    <DBInstanceDescription>Test</DBInstanceDescription>
    <InstanceNetworkType>Classic</InstanceNetworkType>
    <VSwitchId></VSwitchId>
    <VpcId></VpcId>
    <Engine>gpdb</Engine>
    <ExpireTime>2999-09-08T16:00:00Z</ExpireTime>
    <CreateTime>2018-05-07T06:48:47Z</CreateTime>
    <RegionId>cn-hangzhou</RegionId>
    <EngineVersion>4.3</EngineVersion>
    <LockReason></LockReason>
    <DBInstanceStatus>Running</DBInstanceStatus>
    <PayType>Postpaid</PayType>
  </DBInstance>
  <DBInstance>
    <LockMode>Unlock</LockMode>
    <DBInstanceNetType>2</DBInstanceNetType>
    <DBInstanceId>gp-xxxxxxx</DBInstanceId>
    <ZoneId>cn-hangzhou-b</ZoneId>
    <DBInstanceDescription>gp-xxxxxxx</DBInstanceDescription>

```

```

<InstanceNetworkType>VPC</InstanceNetworkType>
<VSwitchId>vsw-xxxxxxx</VSwitchId>
<VpcId>vpc-xxxxxxx</VpcId>
<Engine>gpdb</Engine>
<ExpireTime>2999-09-08T16:00:00Z</ExpireTime>
<CreateTime>2018-03-16T07:10:03Z</CreateTime>
<RegionId>cn-hangzhou</RegionId>
<EngineVersion>4.3</EngineVersion>
<LockReason></LockReason>
<DBInstanceStatus>Running</DBInstanceStatus>
<PayType>Postpaid</PayType>
</DBInstance>
</Items>
<PageNumber>1</PageNumber>
<TotalRecordCount>7</TotalRecordCount>
<RequestId>BBE00C04-A3E8-4114-881D-0480A72CB92E</RequestId>
<PageRecordCount>7</PageRecordCount>
</DescribeDBInstancesResponse>

```

## JSON format

```

{
  " Items " : {
    " DBInstance " : [
      {
        " LockMode " : " Unlock ",
        " DBInstance NetType " : " 1 ",
        " DBInstance Id " : " gp - xxxxxxx ",
        " ZoneId " : " cn - hangzhou - e ",
        " DBInstance Descriptio n " : " gpdb_test ",
        " InstanceNe tworkType " : " Classic ",
        " VSwitchId " : " vsw - xxxxxxx ",
        " VpcId " : " vpc - xxxxxxx ",
        " Engine " : " gpdb ",
        " ExpireTime " : " 2019 - 06 - 27T16 : 00 : 00Z ",
        " CreateTime " : " 2018 - 06 - 27T12 : 07 : 11Z ",
        " RegionId " : " cn - hangzhou ",
        " EngineVers ion " : " 4 . 3 ",
        " LockReason " : "",
        " DBInstance Status " : " Running ",
        " PayType " : " Prepaid "
      },
      {
        " LockMode " : " Unlock ",
        " DBInstance NetType " : " 1 ",
        " DBInstance Id " : " gp - xxxxxxx ",
        " ZoneId " : " cn - hangzhou - e ",
        " DBInstance Descriptio n " : " gp - xxxxxxx ",
        " InstanceNe tworkType " : " Classic ",
        " VSwitchId " : " vsw - xxxxxxx ",
        " VpcId " : " vpc - xxxxxxx ",
        " Engine " : " gpdb ",
        " ExpireTime " : " 2999 - 09 - 08T16 : 00 : 00Z ",
        " CreateTime " : " 2018 - 06 - 27T11 : 51 : 46Z ",
        " RegionId " : " cn - hangzhou ",
        " EngineVers ion " : " 4 . 3 ",
        " LockReason " : "",
        " DBInstance Status " : " Running ",
        " PayType " : " Postpaid "
      },
      {
        " LockMode " : " Unlock ",
        " DBInstance NetType " : " 2 ",

```

```

" DBInstance Id ":" gp - xxxxxxxx ",
" ZoneId ":" cn - hangzhou - e ",
" DBInstance Descriptio n ":" Test ",
" InstanceNe tworkType ":" VPC ",
" VSwitchId ":" vsw - xxxxxxxx ",
" VpcId ":" vpc - xxxxxxxx ",
" Engine ":" gpdb ",
" ExpireTime ":" 2018 - 07 - 27T16 : 00 : 00Z ",
" CreateTime ":" 2018 - 06 - 27T11 : 46 : 11Z ",
" RegionId ":" cn - hangzhou ",
" EngineVers ion ":" 4 . 3 ",
" LockReason ":"",
" DBInstance Status ":" Running ",
" PayType ":" Prepaid "
},
{
" LockMode ":" Unlock ",
" DBInstance NetType ":" 1 ",
" DBInstance Id ":" gp - xxxxxxxx ",
" ZoneId ":" cn - hangzhou - f ",
" DBInstance Descriptio n ":" Test 2 ",
" InstanceNe tworkType ":" Classic ",
" VSwitchId ":"",
" VpcId ":"",
" Engine ":" gpdb ",
" ExpireTime ":" 2018 - 07 - 20T16 : 00 : 00Z ",
" CreateTime ":" 2018 - 06 - 20T05 : 42 : 03Z ",
" RegionId ":" cn - hangzhou ",
" EngineVers ion ":" 4 . 3 ",
" LockReason ":"",
" DBInstance Status ":" Running ",
" PayType ":" Prepaid "
},
{
" LockMode ":" Unlock ",
" DBInstance NetType ":" 2 ",
" DBInstance Id ":" gp - xxxxxxxx ",
" ZoneId ":" cn - hangzhou - b ",
" DBInstance Descriptio n ":" gp - xxxxxxxx ",
" InstanceNe tworkType ":" VPC ",
" VSwitchId ":" vsw - xxxxxxxx ",
" VpcId ":" vpc - xxxxxxxx ",
" Engine ":" gpdb ",
" ExpireTime ":" 2999 - 09 - 08T16 : 00 : 00Z ",
" CreateTime ":" 2018 - 06 - 05T03 : 42 : 41Z ",
" RegionId ":" cn - hangzhou ",
" EngineVers ion ":" 4 . 3 ",
" LockReason ":"",
" DBInstance Status ":" Running ",
" PayType ":" Postpaid "
},
{
" LockMode ":" Unlock ",
" DBInstance NetType ":" 2 ",
" DBInstance Id ":" gp - xxxxxxxx ",
" ZoneId ":" cn - hangzhou - b ",
" DBInstance Descriptio n ":" Test ",
" InstanceNe tworkType ":" Classic ",
" VSwitchId ":"",
" VpcId ":"",
" Engine ":" gpdb ",
" ExpireTime ":" 2999 - 09 - 08T16 : 00 : 00Z ",
" CreateTime ":" 2018 - 05 - 07T06 : 48 : 47Z ",
" RegionId ":" cn - hangzhou ",

```

```

    " EngineVers ion ":" 4 . 3 ",
    " LockReason ":"",
    " DBInstance Status ":" Running ",
    " PayType ":" Postpaid "
  },
  {
    " LockMode ":" Unlock ",
    " DBInstance NetType ":" 2 ",
    " DBInstance Id ":" gp - xxxxxxxx ",
    " ZoneId ":" cn - hangzhou - b ",
    " DBInstance Descriptio n ":" gp - xxxxxxxx ",
    " InstanceNe tworkType ":" VPC ",
    " VSwitchId ":" vsw - xxxxxxxx ",
    " VpcId ":" vpc - xxxxxxxx ",
    " Engine ":" gpdb ",
    " ExpireTime ":" 2999 - 09 - 08T16 : 00 : 00Z ",
    " CreateTime ":" 2018 - 03 - 16T07 : 10 : 03Z ",
    " RegionId ":" cn - hangzhou ",
    " EngineVers ion ":" 4 . 3 ",
    " LockReason ":"",
    " DBInstance Status ":" Running ",
    " PayType ":" Postpaid "
  }
]
},
" PageNumber ": 1 ,
" TotalRecor dCount ": 7 ,
" RequestId ":" BBE00C04 - A3E8 - 4114 - 881D - 0480A72CB9 2E ",
" PageRecord Count ": 7
}

```

## 7.5 DescribeRegions

### Description

You can call this operation to query available regions and zones. You must make a DescribeRegions request to query the value of RegionId of the target region before calling the CreateDBInstance operation.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to DescribeRegions.

## Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .
Regions	List<Region>	The list of regions.

Table 7-3: Region parameters

Name	Type	Description
RegionId	String	The name of a region.
Zones	List<Zone>	The list of zones.

Table 7-4: Zone parameters

Name	Type	Description
ZoneId	String	The name of a zone.
VpcEnabled	Boolean	This parameter indicates whether a VPC is available.

## Sample requests

```
https://gpdb.aliyuncs.com/?Action=DescribeRegions
&<Common request parameters>
```

## Sample responses

## XML format

```
< DescribeRegionsResponse >
  < RequestId > FF8EB261 - 5447 - 4B1B - 9F14 - 294CEA008A 9F </
  RequestId >
  < Regions >
    < Region >
      < RegionId > cn - beijing </ RegionId >
      < Zones >
        < Zone >
          < VpcEnabled > true </ VpcEnabled >
          < ZoneId > cn - beijing - c </ ZoneId >
        </ Zone >
        < Zone >
          < VpcEnabled > true </ VpcEnabled >
          < ZoneId > cn - beijing - g </ ZoneId >
        </ Zone >
      </ Zones >
    </ Region >
    < Region >
      < RegionId > cn - zhangjiakou </ RegionId >
      < Zones >
```

```
< Zone >
  < VpcEnabled > true </ VpcEnabled >
  < ZoneId > cn - zhangjiako u - b </ ZoneId >
</ Zone >
</ Zones >
</ Region >
< Region >
  < RegionId > cn - hangzhou </ RegionId >
  < Zones >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > cn - hangzhou - b </ ZoneId >
    </ Zone >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > cn - hangzhou - e </ ZoneId >
    </ Zone >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > cn - hangzhou - f </ ZoneId >
    </ Zone >
  </ Zones >
</ Region >
< Region >
  < RegionId > cn - shanghai </ RegionId >
  < Zones >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > cn - shanghai - b </ ZoneId >
    </ Zone >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > cn - shanghai - d </ ZoneId >
    </ Zone >
  </ Zones >
</ Region >
< Region >
  < RegionId > cn - shenzhen </ RegionId >
  < Zones >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > cn - shenzhen - a </ ZoneId >
    </ Zone >
  </ Zones >
</ Region >
< Region >
  < RegionId > ap - southeast - 1 </ RegionId >
  < Zones >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > ap - southeast - 1b </ ZoneId >
    </ Zone >
  </ Zones >
</ Region >
< Region >
  < RegionId > ap - southeast - 2 </ RegionId >
  < Zones >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > ap - southeast - 2a </ ZoneId >
    </ Zone >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > ap - southeast - 2b </ ZoneId >
    </ Zone >
  </ Zones >
</ Region >
```

```
</ Zone >
</ Zones >
</ Region >
< Region >
  < RegionId > us - east - 1 </ RegionId >
  < Zones >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > us - east - 1b </ ZoneId >
    </ Zone >
  </ Zones >
</ Region >
< Region >
  < RegionId > us - west - 1 </ RegionId >
  < Zones >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > us - west - 1a </ ZoneId >
    </ Zone >
  </ Zones >
</ Region >
< Region >
  < RegionId > cn - chengdu </ RegionId >
  < Zones >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > cn - chengdu - a </ ZoneId >
    </ Zone >
  </ Zones >
</ Region >
< Region >
  < RegionId > ap - southeast - 3 </ RegionId >
  < Zones >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > ap - southeast - 3a </ ZoneId >
    </ Zone >
  </ Zones >
</ Region >
< Region >
  < RegionId > cn - huhehaote </ RegionId >
  < Zones >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > cn - huhehaote - a </ ZoneId >
    </ Zone >
  </ Zones >
</ Region >
< Region >
  < RegionId > ap - south - 1 </ RegionId >
  < Zones >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > ap - south - 1a </ ZoneId >
    </ Zone >
  </ Zones >
</ Region >
< Region >
  < RegionId > ap - southeast - 5 </ RegionId >
  < Zones >
    < Zone >
      < VpcEnabled > true </ VpcEnabled >
      < ZoneId > ap - southeast - 5a </ ZoneId >
    </ Zone >
  </ Zones >
</ Region >
```

```

</ Zones >
</ Region >
</ Regions >
</ DescribeRegionsResponse >

```

## JSON format

```

{
  "RequestId ":" FF8EB261 - 5447 - 4B1B - 9F14 - 294CEA008A 9F ",
  "Regions ":{
    "Region ":[
      {
        " RegionId ":" cn - beijing ",
        " Zones ":{
          " Zone ":[
            {
              " VpcEnabled ": true ,
              " ZoneId ":" cn - beijing - c "
            },
            {
              " VpcEnabled ": true ,
              " ZoneId ":" cn - beijing - g "
            }
          ]
        }
      },
      {
        " RegionId ":" cn - zhangjiako u ",
        " Zones ":{
          " Zone ":[
            {
              " VpcEnabled ": true ,
              " ZoneId ":" cn - zhangjiako u - b "
            }
          ]
        }
      },
      {
        " RegionId ":" cn - hangzhou ",
        " Zones ":{
          " Zone ":[
            {
              " VpcEnabled ": true ,
              " ZoneId ":" cn - hangzhou - b "
            },
            {
              " VpcEnabled ": true ,
              " ZoneId ":" cn - hangzhou - e "
            },
            {
              " VpcEnabled ": true ,
              " ZoneId ":" cn - hangzhou - f "
            }
          ]
        }
      },
      {
        " RegionId ":" cn - shanghai ",
        " Zones ":{
          " Zone ":[
            {
              " VpcEnabled ": true ,
              " ZoneId ":" cn - shanghai - b "
            }
          ]
        }
      }
    ]
  }
}

```



```

    },
    {
      " VpcEnabled ": true ,
      " ZoneId ":" cn - shanghai - d "
    }
  ]
}
},
{
  " RegionId ":" cn - shenzhen ",
  " Zones ":{
    " Zone ":[
      {
        " VpcEnabled ": true ,
        " ZoneId ":" cn - shenzhen - a "
      }
    ]
  }
},
{
  " RegionId ":" ap - southeast - 1 ",
  " Zones ":{
    " Zone ":[
      {
        " VpcEnabled ": true ,
        " ZoneId ":" ap - southeast - 1b "
      }
    ]
  }
},
{
  " RegionId ":" ap - southeast - 2 ",
  " Zones ":{
    " Zone ":[
      {
        " VpcEnabled ": true ,
        " ZoneId ":" ap - southeast - 2a "
      },
      {
        " VpcEnabled ": true ,
        " ZoneId ":" ap - southeast - 2b "
      }
    ]
  }
},
{
  " RegionId ":" us - east - 1 ",
  " Zones ":{
    " Zone ":[
      {
        " VpcEnabled ": true ,
        " ZoneId ":" us - east - 1b " 3333
      }
    ]
  }
},
{
  " RegionId ":" us - west - 1 ",
  " Zones ":{
    3333333333 " Zone ":[
      {
        " VpcEnabled ": true ,
        " ZoneId ":" us - west - 1a "
      }
    ]
  }
}

```

```
    ]
  },
  {
    " RegionId ":" cn - chengdu ",
    " Zones ":{
      " Zone ":[
        {
          " VpcEnabled ": true ,
          " ZoneId ":" cn - chengdu - a "
        }
      ]
    }
  },
  {
    " RegionId ":" ap - southeast - 3 ",
    " Zones ":{
      " Zone ":[
        {
          " VpcEnabled ": true ,
          " ZoneId ":" ap - southeast - 3a "
        }
      ]
    }
  },
  {
    " RegionId ":" cn - huhehaote ",
    " Zones ":{
      " Zone ": [
        {
          " VpcEnabled ": true ,
          " ZoneId ":" cn - huhehaote - a "
        }
      ]
    }
  },
  {
    " RegionId ":" ap - south - 1 ",
    " Zones ":{
      " Zone ":[
        {
          " VpcEnabled ": true ,
          " ZoneId ":" ap - south - 1a "
        }
      ]
    }
  },
  {
    " RegionId ":" ap - southeast - 5 ",
    " Zones ":{
      " Zone ":[
        {
          " VpcEnabled ": true ,
          " ZoneId ":" ap - southeast - 5a "
        }
      ]
    }
  }
]
```

}

## 7.6 DescribeResourceUsage

### Description

You can call this operation to check disk space that is used by an instance.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to DescribeResourceUsage.
DBInstanceId	String	Yes	The instance ID.

### Response parameters

Name	Type	Description
<Common response parameters>	N/A	For more information, see <a href="#">Common response parameters</a> .
DBInstanceId	String	The instance ID.
Engine	String	The database type.
DiskUsed	Integer	The used space of a disk. The used space indicates the user data space (DataSize) and log data space (LogSize) combined. A value of -1 indicates that this parameter is not applicable. Unit: Bytes.
DataSize	Integer	The disk space that is used to store user data. A value of -1 indicates that this parameter is not applicable. Unit: Bytes.

Name	Type	Description
LogSize	Integer	The disk space that is used to store log files. A value of -1 indicates that this parameter is not applicable. Unit: Bytes.
BackupSize	Integer	The disk space that is used to store backup files . A value of -1 indicates that this parameter is not applicable. Unit: Bytes.

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=DescribeRe
sourceUsag
e
&DBInstance
Id=gp-xxxxxxx
&<Common
request
parameters>
```

### Sample responses

#### XML format

```
<DescribeRe
sourceUsag
eResponse>
  <DBInstance
Id>gp-xxxxxxx</DBInstance
Id>
  <RequestId>860FBA9E-BFFD-493E-91A1-2349B9D74A
E7</
RequestId>
  <LogSize>201326592</LogSize>
  <DataSize>83886080</DataSize>
  <BackupSize>26624</BackupSize>
  <Engine>gpdb</Engine>
  <DiskUsed>285212672</DiskUsed>
</DescribeRe
sourceUsag
eResponse>
```

#### JSON format

```
{
  "DBInstance
Id":"gp-xxxxxxx",
  "RequestId":"860FBA9E-BFFD-493E-91A1-2349B9D74A
E7",
  "LogSize":201326592,
  "DataSize":83886080,
  "BackupSize":26624,
  "Engine":"gpdb",
  "DiskUsed":285212672
}
```

}

## 7.7 ModifyDBInstanceConnectionMode

### Description

You can call this operation to modify the access mode of the instance. Currently, two modes are supported:

- Standard mode
- Safe mode

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to ModifyDBInstanceConnectionMode.
DBInstanceId	String	Yes	The ID of the instance.
ConnectionMode	String	Yes	<ul style="list-style-type: none"> <li>• Standard</li> <li>• Safe</li> </ul>

### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=ModifyDBInstanceConnectionMode
&DBInstanceId=gp-xxxxxxx
&ConnectionMode=Safe
```

```
&< Common request parameters >
```

### Sample responses

#### XML format

```
< BaseResponse >
  < RequestId > 8361E350 - 4CCC - 4D28 - B020 - 55B4DCB75D 3B </
    RequestId >
</ BaseResponse >
```

#### JSON format

```
{
  "RequestId ":" 8361E350 - 4CCC - 4D28 - B020 - 55B4DCB75D 3B ",
}
```

## 7.8 ModifyDBInstanceDescription

### Description

You can call this API to modify the description of the instance so that you can easily identify it.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to <code>ModifyDBInstanceDescription</code> .
DBInstanceId	String	Yes	The ID of the instance.
DBInstanceDescription	String	Yes	The description of the instance.

## Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

## Sample requests

```
https://gpdb.aliyuncs.com/?Action=ModifyDBInstanceDescription
&DBInstanceId=gp-xxxxxxx
&DBInstanceDescription=testInstanceDescribe
<Common request parameters>
```

## Sample responses

## XML format

```
<ModifyDBInstanceDescriptionResponse>
  <RequestId>107BE202-D1A2-479E-98E0-A892B47256-2F
</RequestId>
</ModifyDBInstanceDescriptionResponse>
```

## JSON format

```
{
  "RequestId": "107BE202-D1A2-479E-98E0-A892B47256-2F"
}
```

## 7.9 ModifyDBInstanceMaintainTime

## Description

You can call this operation to modify the maintenance window of the instance. Generally, it is set to the periods of off-peak service usage to minimize the impact on services. Alibaba Cloud performs instance maintenance during the maintenance window you set.

## Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to ModifyDBInstanceMaintainTime.
DBInstanceId	String	Yes	The ID of the instance.
StartTime	String	Yes	The start time of the maintenance window. For example, 02:00Z.
EndTime	String	Yes	The end time of the maintenance window. For example, 03:00Z (the start time should be earlier than the end time).

### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=ModifyDBInstanceMaintainTime
&DBInstanceId=gp-xxxxxxx
&StartTime=02:00Z
&EndTime=03:00Z
<Common request parameters>
```

### Sample responses

#### XML format

```
<ModifyDBInstanceMaintainTimeResponse>
  <RequestId>CA9A34C8-AC95-413B-AC6A-CEBF67429CA
</RequestId>
```



```
</ ModifyDBInstanceMainMaintenanceResponse >
```

### JSON format

```
{
  "RequestId": "CA9A34C8 - AC95 - 413B - AC6A - CEBF67429C CA"
}
```

## 7.10 RestartDBInstance

### Description

You can call this operation to restart the database instance.

### Parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to RestartDBInstance.
DBInstanceId	String	Yes	The ID of the instance.

### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=RestartDBInstance
&DBInstanceId=gp-xxxxxxx
&<Common request parameters>
```

### Sample responses

#### XML format

```
<RestartDBInstance>
  <RequestId>A7356493 - 7141 - 4393 - 8951 - CDA8AB5D67 EC
</RequestId>
```

```
</ RestartDBInstance >
```

### JSON format

```
{
  "RequestId": "A7356493 - 7141 - 4393 - 8951 - CDA8AB5D67 EC"
}
```

## 7.11 DescribeDBInstancePerformance

### Description

You can call this operation to check the list of database performance metrics for an instance over a period of time.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to DescribeDBInstancePerformance.
DBInstanceId	String	Yes	The instance name.
Key	String	Yes	Metrics of database performance. Separate multiple metrics with commas. For more information, see <a href="#">Performance parameters</a> .
StartTime	String	Yes	The start time of a period during which you want to check metrics. For example, 2018-06-11T15:00Z.

Name	Type	Required	Description
EndTime	String	Yes	The end time of a period during which you want to check metrics. For example, 2018-06-11T16:00Z.

### Response parameters

Name	Type	Description
<Common response paramters>	None.	For more information, see <a href="#">Common response parameters</a> .
DBInstanceId	String	The instance name.
Engine	String	The database type.
StartTime	String	The start time. The format is YYYY - MM - DDTHH : mmZ , such as 2018-05-30T03:29Z.
EndTime	String	The end time. The end time must not be earlier than the start time. The format is YYYY - MM - DDTHH : mmZ , such as 2018-05-30T03:29Z.
PerformanceKeys	List<PerformanceKey>	List of metrics, such as { perf1, perf2, perf3, ...}.

Table 7-5: PerformanceKey parameters

Name	Type	Description
Key	String	The name of a metric.
Unit	String	The unit of a metric.

Name	Type	Description
ValueFormat	String	The format of a value: If multiple metrics return in the value of this parameter, these metrics will be separated with ampersands (&), such as <code>com_delete &amp; com_insert &amp; com_insert _select &amp; com_replac e .</code>
GroupValues	List<GroupValue>	List of group values, such as {value1, value2, ...}.

Table 7-6: GroupValue parameters

Name	Type	Description
Name	String	The group name.
Values	List<Value>	List of values, such as {value1, value2, ...}.

Table 7-7: Value parameters

Name	Type	Description
Value	String	The value of a metric.
date	String	The time when the metric value was recorded.

Sample requests

```
https://gpdb.aliyuncs.com/?Action=DescribeDBInstancePerformance
&DBInstanceId=gp-xxxxxxx
&key=CpuUsage,MemoryUsage,Gpdb_SpaceUsage,Gpdb_IOPS,Gpdb_session
&EndTime=MAID:00Z
&StartTime=2015-11-30T01:33Z
<Common request parameters>
```

Sample responses

XML format

```
<DescribeDBInstancePerformanceResponse>
```

```

    < RequestId > 5E85244A - AB47 - 46A3 - A3AD - 5F307DCB40 7E </
RequestId >
    < DBInstance Id > gp - xxxxxxxx </ DBInstance Id >
    < PerformanceKeys >
      < Key > MemoryUsage </ Key >
      < GroupValue s >
        < Name > 7198315 - 1530522046 144 - 1 </ Name >
        < Values />
      </ GroupValue s >
      < GroupValue s >
        < Name > 7198315 - 1530522046 144 - 0 </ Name >
        < Values />
      </ GroupValue s >
      < GroupValue s >
        < Values />
        < Name > master </ Name >
      </ GroupValue s >
      < Unit >%</ Unit >
      < ValueFormat > mem_usage </ ValueFormat >
    </ PerformanceKeys >
    < PerformanceKeys >
      < Key > Gpdb_session </ Key >
      < GroupValue s >
        < Name > 7198315 - 1530522046 144 - 1 </ Name >
        < Values />
      </ GroupValue s >
      < GroupValue s >
        < Name > 7198315 - 1530522046 144 - 0 </ Name >
        < Values />
      </ GroupValue s >
      < GroupValue s >
        < Values />
        < Name > master </ Name >
      </ GroupValue s >
      < Unit > int </ Unit >
      < ValueFormat > conn_count </ ValueFormat >
    </ PerformanceKeys >
    < PerformanceKeys >
      < Key > CpuUsage </ Key >
      < GroupValue s >
        < Name > 7198315 - 1530522046 144 - 1 </ Name >
        < Values />
      </ GroupValue s >
      < GroupValue s >
        < Name > 7198315 - 1530522046 144 - 0 </ Name >
        < Values />
      </ GroupValue s >
      < GroupValue s >
        < Values />
        < Name > master </ Name >
      </ GroupValue s >
      < Unit >%</ Unit >
      < ValueFormat > cpu_usage </ ValueFormat >
    </ PerformanceKeys >
    < PerformanceKeys >
      < Key > Gpdb_IOPS </ Key >
      < GroupValue s >
        < Name > 7198315 - 1530522046 144 - 1 </ Name >
        < Values />
      </ GroupValue s >
      < GroupValue s >
        < Name > 7198315 - 1530522046 144 - 0 </ Name >
        < Values />
      </ GroupValue s >

```

```

< GroupValue s >
  < Values />
  < Name > master </ Name >
</ GroupValue s >
< Unit > int </ Unit >
< ValueForma t > data_iops & write_iops & read_iops </ ValueForma
t >
</ Performanc eKeys >
< Performanc eKeys >
  < Key > Gpdb_Space Usage </ Key >
  < GroupValue s >
    < Name > 7198315 - 1530522046 144 - 1 </ Name >
    < Values />
  </ GroupValue s >
  < GroupValue s >
    < Name > 7198315 - 1530522046 144 - 0 </ Name >
    < Values />
  </ GroupValue s >
  < GroupValue s >
    < Values />
    < Name > master </ Name >
  </ GroupValue s >
  < Unit > Byte </ Unit >
  < ValueForma t > space </ ValueForma t >
</ Performanc eKeys >
< EndTime > 2018 - 07 - 09T03 : 47Z </ EndTime >
< StartTime > 2018 - 07 - 08T03 : 47Z </ StartTime >
< Engine > gpdb </ Engine >
</ DescribeDB InstancePe rformanceR esponse >

```

## JSON format

```

{
  " RequestId ":" 5E85244A - AB47 - 46A3 - A3AD - 5F307DCB40 7E
",
  " DBInstance Id ":" gp - xxxxxxxx ",
  " Performanc eKeys ":[
    {
      " Key ":" MemoryUsag e ",
      " GroupValue s ":[
        {
          " Name ":" 7198315 - 1530522046 144 - 1 ",
          " Values ": Array [ 288 ]
        },
        {
          " Name ":" 7198315 - 1530522046 144 - 0 ",
          " Values ": Array [ 288 ]
        },
        {
          " Values ": Array [ 288 ],
          " Name ":" master "
        }
      ]
    },
    " Unit ":"%",
    " ValueForma t ":" mem_usage "
  ],
  {
    " Key ":" Gpdb_sessi on ",
    " GroupValue s ":[
      {
        " Name ":" 7198315 - 1530522046 144 - 1 ",
        " Values ": Array [ 288 ]
      },
    ],
  }
}

```

```

        {
            " Name ":" 7198315 - 1530522046 144 - 0 ",
            " Values ": Array [ 288 ]
        },
        {
            " Values ": Array [ 288 ],
            " Name ":" master "
        }
    ],
    " Unit ":" int ",
    " ValueForma t ":" conn_count "
},
{
    " Key ":" CpuUsage ",
    " GroupValue s ":[
        {
            " Name ":" 7198315 - 1530522046 144 - 1 ",
            " Values ": Array [ 288 ]
        },
        {
            " Name ":" 7198315 - 1530522046 144 - 0 ",
            " Values ": Array [ 288 ]
        },
        {
            " Values ": Array [ 288 ],
            " Name ":" master "
        }
    ],
    " Unit ":"%",
    " ValueForma t ":" cpu_usage "
},
{
    " Key ":" Gpdb_IOPS ",
    " GroupValue s ":[
        {
            " Name ":" 7198315 - 1530522046 144 - 1 ",
            " Values ": Array [ 288 ]
        },
        {
            " Name ":" 7198315 - 1530522046 144 - 0 ",
            " Values ": Array [ 288 ]
        },
        {
            " Values ": Array [ 288 ],
            " Name ":" master "
        }
    ],
    " Unit ":" int ",
    " ValueForma t ":" data_iops & write_iops & read_iops
"
},
{
    " Key ":" Gpdb_Space Usage ",
    " GroupValue s ":[
        {
            " Name ":" 7198315 - 1530522046 144 - 1 ",
            " Values ": Array [ 288 ]
        },
        {
            " Name ":" 7198315 - 1530522046 144 - 0 ",
            " Values ": Array [ 288 ]
        },
        {
            " Values ": Array [ 288 ],

```

```
        " Name ":" master "
      }
    ],
    " Unit ":" Byte ",
    " ValueForma t ":" space "
  }
],
" EndTime ":" 2018 - 07 - 09T03 : 47Z ",
" StartTime ":" 2018 - 07 - 08T03 : 47Z ",
" Engine ":" gpdb "
}
```



## 8 Database management

### 8.1 DeleteDatabase

#### Description

You can call this operation to remove a database of an instance.

#### Request parameters

Name	Type	Required	Description
<Common request paramters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to DeleteData base.
DBInstanceId	String	Yes	The instance name.
DBName	String	Yes	The database name.

#### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

#### Sample requests

```
https://gpdb.aliyuncs.com/?Action=DeleteDatabase
&DBName=testdb01
&DBInstanceId=gp-xxxxxxx
&<Common request parameters>
```

#### Sample responses

##### XML format

```
<DeleteDatabaseResponse>
  <RequestId>07F6177E-6DE4-408A-BB4F-0723301340F3</RequestId>
```

```
</ DeleteData baseResponse >
```

### JSON format

```
{  
  "RequestId ":" 07F6177E - 6DE4 - 408A - BB4F - 0723301340 F3 "  
}
```

# 9 Account management

## 9.1 CreateAccount

### Description

You can call this operation to create an account for a database.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to CreateAccount.
DBInstanceId	String	Yes	The instance name.
DatabaseName	String	No	The database name.
AccountName	String	Yes	The account name.
AccountPassword	String	Yes	The password.
AccountDescription	String	No	The description of the account.

### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=CreateAccount
&AccountName=testacc02
&AccountPassword=pw1234
&DBInstanceId=gp-xxxxxxx
```

```
&< Common request parameters >
```

### Sample responses

#### XML format

```
< CreateAcco untRespons e >
  < RequestId > D4D4BE8A - DD46 - 440A - BFCD - EE31DA81C9 DD
</ RequestId >
</ CreateAcco untRespons e >
```

#### JSON format

```
{
  " RequestId ":" D4D4BE8A - DD46 - 440A - BFCD - EE31DA81C9 DD "
}
```

## 9.2 DescribeAccounts

### Description

You can call this operation to query the list of accounts.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to DescribeAccounts.
DBInstanceId	String	Yes	The instance ID.
AccountName	String	No	The account name.

### Response parameters

Name	Type	Description
<Common response paramters>	-	For more information, see <a href="#">Common response parameters</a> .
Accounts	List<DBInstanceAccount>	The list of accounts.

Table 9-1: DBInstanceAccount parameters

Name	Type	Description
DBInstanceId	String	The instance name.
AccountName	String	The account name.
AccountStatus	String	The account status is as follows: <ul style="list-style-type: none"> <li>· 0: indicates that the account is being created</li> <li>·</li> <li>· 1: indicates that the account is being used.</li> <li>· 3: indicates that the account is being deleted</li> <li>·</li> </ul>
AccountDescription	String	The description of the account.

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=DescribeAccounts
&DBInstanceId=gp-xxxxxxx
&<Common request parameters>
```

### Sample responses

#### XML format

```
<DescribeAccountsResponse>
  <RequestId>7565770E-7C45-462D-BA4A-8A5396F2CAD1</RequestId>
  <Accounts>
    <DBInstanceAccount>
      <AccountName>testaccount_1</AccountName>
      <DBInstanceId>gp-xxxxxxx</DBInstanceId>
      <AccountStatus>1</AccountStatus>
      <AccountDescription></AccountDescription>
    </DBInstanceAccount>
  </Accounts>
</DescribeAccountsResponse>
```

#### JSON format

```
{
  "Accounts": {
    "DBInstanceAccount": [
      {
        "AccountDescription": "",
        "DBInstanceId": "gp-xxxxxxx",
```

```

    " AccountSta  tus ": " 1 ",
    " AccountNam  e ": " testaccoun  t_1 "
  }
]
},
" RequestId ": " 7565770E - 7C45 - 462D - BA4A - 8A5396F2CA  D1 "
}

```

## 9.3 ModifyAccountDescription

### Description

You can call this operation to modify the description of the account so that you can easily identify it.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to <code>ModifyAccountDescription</code> .
DBInstanceId	String	Yes	The ID of the instance.

Name	Type	Required	Description
AccountName	String	Yes	<p>The name of the account. It must be unique and meet the following requirements:</p> <ul style="list-style-type: none"><li>• Starts with a letter.</li><li>• Contains only lowercase letters , numbers, and underscores.</li><li>• Length constraints: Maximum length of 16 characters.</li><li>• Reserved keywords are not allowed to be used.</li></ul>

Name	Type	Required	Description
AccountDescription	String	Yes	<p>Specifies the name of the account that has been modified. The name must meet the following requirements:</p> <ul style="list-style-type: none"> <li>· Starts with a Chinese or English character.</li> <li>· Starting with "http://" or "https://" is not allowed</li> <li>·</li> <li>· Contains only Chinese characters, English characters, underscores (_), hyphens (-), and numbers.</li> <li>· Length constraints: Minimum length of 2 characters. Maximum length of 256 characters.</li> </ul>

### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=ModifyAccountDescription
&DBInstanceId=gp-xxxxxxx
&AccountName=testAccount
&AccountDescription=testAccount describe
```



```
&< Common request parameters >
```

### Sample responses

#### XML format

```
< ModifyAccountDescriptionResponse >
  < RequestId > 99BBBD5E - B5D8 - 4FC8 - B8BF - FB1A0A38BB A2
</ RequestId >
</ ModifyAccountDescriptionResponse >
```

#### JSON format

```
{
  "RequestId": "99BBBD5E - B5D8 - 4FC8 - B8BF - FB1A0A38BB A2"
}
```

## 9.4 ResetAccountPassword

### Description

You can call this operation to reset the password for your account. The prerequisites are as follows.

- The instance is running.
- The instance is not locked.

### Parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to ResetAccountPassword.
DBInstanceId	String	Yes	The ID of the instance.
AccountName	String	Yes	The name of the account.

Name	Type	Required	Description
AccountPassword	String	Yes	The new password consists of at least three types of characters of uppercase letters , lowercase letters , numbers, and special characters . The special character is "!". Length constraints : Minimum length of 8 characters. Maximum length of 32 characters. @#\$%^&*()_+-.=。

### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=ResetAccountPassword
&AccountName=testaccount_1
&AccountPassword=Testaccount_1
&DBInstanceId=gp-xxxxxxx
&<Common request parameters>
```

### Sample responses

#### XML format

```
<ResetAccountPasswordResponse>
  <RequestId>187C80FC-75C4-477C-BBF2-A368A36D041C
</RequestId>
</ResetAccountPasswordResponse>
```

#### JSON format

```
{
  "RequestId": "187C80FC-75C4-477C-BBF2-A368A36D041C"
}
```

# 10 Security management

## 10.1 DescribeDBInstanceIPArrayList

### Description

You can call this operation to query the list of whitelists for an instance.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to DescribeDBInstanceIPArrayList.
DBInstanceId	String	Yes	The instance name.

### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .
Items	List<DBInstanceIPArray>	The list of whitelists for an instance.

Table 10-1: The parameters of DBInstanceIPArray

Name	Type	Description
DBInstanceIPArrayName	String	The name of the whitelist.

Name	Type	Description
DBInstanceIPArrayAttribute	String	This parameter is empty by default. You can use this parameter to specify an attribute for a whitelist. A whitelist with the <code>hidden</code> attribute does not appear in the console.
SecurityIPList	String	You can add up to 1000 IP addresses to a whitelist. Multiple IP addresses are separated by commas. The format is as follows: <ul style="list-style-type: none"> <li>• 0.0.0.0/0</li> <li>• 10.23.12.24 (IP)</li> <li>• 10.23.12.24/24 represents the IPv4 address 10.23.12.24. Its subnet mask is 255.255.0, which has 24 leading 1 bits, and its associated routing prefix. The IP address is expressed as Classless Inter-Domain Routing (CIDR) notation.</li> </ul>

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=DescribeDBInstanceIPArrayList
&DBInstanceId=gp-xxxxxxx
&<CommonRequestParameters>
```

### Sample responses

#### XML format

```
<DescribeDBInstanceIPArrayListResponse>
  <RequestId>CB7AA0BF-BE41-480E-A3DC-C97BF85A391B</RequestId>
  <Items>
    <DBInstanceIPArray>
      <groupName>default</groupName>
      <groupTag></groupTag>
      <securityIPList>127.0.0.1</securityIPList>
    </DBInstanceIPArray>
```

```
</ DescribeDB InstanceIP ArrayListR esponse >
```

### JSON format

```
{
  " Items ":{
    " DBInstance IPArray ":[
      {
        " groupName ":" default ",
        " groupTag ":"",
        " securityIP List ":" 127 . 0 . 0 . 1 "
      }
    ]
  },
  " RequestId ":" CB7AA0BF - BE41 - 480E - A3DC - C97BF85A39 1B "
}
```

## 10.2 ModifySecurityIps


### Description

You can call this operation to modify the whitelist. The whitelist includes the IP addresses that are allowed to access the database instance. An instance must meet the following conditions when you call this API:

- The instance is running.
- The instance has not been locked.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to <code>ModifySecurityIps</code> .
DBInstanceId	String	Yes	The instance name.

Name	Type	Required	Description
SecurityIPList	String	Yes	<p>You can add up to 1000 IP addresses under a whitelist. Multiple IP addresses are separated by commas. The format is as follows:</p> <ul style="list-style-type: none"> <li>· 0.0.0.0/0</li> <li>· 10.23.12.24 (IP)</li> <li>· 10.23.12.24/24 represents the IPv4 address 10.23.12.24. Its subnet mask is 255.255.255.0</li> <li>· /24 represents the length of a routing prefix</li> <li>· The length ranges from 1 to 32. The IP address is expressed as a Classless Inter-Domain Routing (CIDR) notation.</li> </ul>
DBInstanceIPArrayName	String	No	<p>The name of a whitelist. If you do not enter the name, IP addresses are added under the default whitelist.</p> <div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;">  <b>Note:</b>                      You can create up to 50 whitelists for an instance.                 </div>

Name	Type	Required	Description
DBInstance IPArrayAttribute	String	No	The parameter is empty by default. You can use this parameter to specify an attribute for a whitelist. A whitelist with the <code>hidden</code> attribute does not appear in the console.

### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=ModifySecurityIps
&DBInstanceId=gp-xxxxxxx
&SecurityIPList=192.168.0.1
<Common request parameters>
```

### Sample responses

#### XML format

```
<ModifySecurityIpsResponse>
  <RequestId>871C698F-B43D-4D1D-ACD6-DF56B0F89978</RequestId>
</ModifySecurityIpsResponse>
```

#### JSON format

```
{
  "RequestId": "871C698F-B43D-4D1D-ACD6-DF56B0F89978"
}
```

# 11 Log management

---

## 11.1 DescribeSQLLogFiles

### Description

You can call this operation to query the list of audit log files.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to DescribeSQLLogFiles.
DBInstanceId	String	Yes	The instance name.
FileName	String	No	The file name.
PageSize	Integer	No	The number of records on each page. Valid values : 30, 50, and 100. Default value: 30.
PageNumber	Integer	No	The page number . The value of the parameter is greater than zero and up to the maximum value of an integer. Default value: 1.



## Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .
TotalRecordCount	Integer	The total number of records.
PageNumber	Integer	The page number.
PageRecordCount	Integer	The number of records on the current page.
Items	List<LogFile>	The list of the audit log files.

Table 11-1: Parameters of LogFile

Name	Type	Description
FileID	Integer	The name of an audit log file.
LogStatus	String	<ul style="list-style-type: none"> <li>· NoStart: The database has not started generating audit log files.</li> <li>· Generating: The database is generating audit log files.</li> <li>· Success: The database has generated audit log files.</li> <li>· Failed: The database fails to generate audit log files.</li> </ul>
LogStartTime	String	The time when an audit log starts to record data.
LogEndTime	String	The time when an audit log stops to record data.
LogDownloadURL	String	The download URL of audit log files. If the download URL is unavailable, this parameter will be empty.

Name	Type	Description
LogSize	Long	The size of an audit log file . Unit: bytes.

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=DescribeSQLLogFiles
&DBInstanceId=gp-xxxxxxx
&<CommonRequestParameters>
```

### Sample responses

#### XML format

```
<DescribeSQLLogFilesResponse>
  <Items></Items>
  <PageNumber>1</PageNumber>
  <TotalRecordCount>0</TotalRecordCount>
  <RequestId>66E164C1-D7F2-4D85-849D-E2883FCFFB-A5</
  RequestId>
  <PageRecordCount>0</PageRecordCount>
</DescribeSQLLogFilesResponse>
```

#### JSON format

```
{
  "Items": {
    "LogFile": [
    ]
  },
  "PageNumber": 1,
  "TotalRecordCount": 0,
  "RequestId": "66E164C1-D7F2-4D85-849D-E2883FCFFB-A5",
  "PageRecordCount": 1
}
```

## 11.2 DescribeSQLLogRecords

### Description

You can call this operation to query SQL audit logs of the instance.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeSQLLogRecords.
DBInstanceId	String	Yes	The instance name.
Database	String	No	All databases will be queried by default.
User	String	No	All users will be checked by default.
QueryKeywords	String	No	You can specify keywords for a query. Separate multiple keywords with spaces. The maximum number of keywords is 10.
StartTime	String	Yes	The start time. You can query audit logs generated after the specified time. The format is <code>yyyy - MM - ddTHH : mm : ssZ</code> .
EndTime	String	Yes	The end time. You can query audit logs generated before the specified time. The format is <code>yyyy - MM - ddTHH : mm : ssZ</code> . The end time must be no earlier than the start time.

Name	Type	Required	Description
PageSize	Integer	No	The number of records on each page. Valid values : 30, 50, and 100. Default value: 30.
PageNumber	Integer	No	The page number . The value of this parameter is greater than zero and up to the maximum value of an Integer. Default value: 1.

## Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .
TotalRecordCount	Integer	The total number of records.
PageNumber	Integer	The page number.
PageRecordCount	Integer	The number of SQL log records on the current page.
Items	List<SQLRecord>	None.

Table 11-2: SQLRecord parameters

Name	Type	Description
DBName	String	The database name.
AccountName	String	The account name.
HostAddress	String	The client IP address.
SQLText	String	The SQL statement.
TotalExecutionTimes	Long	The execution time of the query. Unit: microseconds.

Name	Type	Description
ReturnRowCounts	Long	The number of records returned from the query.
ThreadID	String	Thread ID.
ExecuteTime	String	The time when you execute the query. The format is yyyy - MM - ddTHH : mm : ssZ , such as 2011-05-30. T12:11:20Z.

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=DescribeSQLLogRecords
&DBInstanceId=gp-xxxxxxx
&StartTime=2018-07-09T04:50:20Z
&EndTime=2018-07-09T08:50:20Z
<Common request parameters>
```

### Sample responses

#### XML format

```
<DescribeSQLLogRecordsResponse>
  <Items></Items>
  <TotalRecordCount>0</TotalRecordCount>
  <PageNumber>1</PageNumber>
  <RequestId>9B24F29F-BA7F-47A3-838E-C6A993888388</RequestId>
  <PageRecordCount>0</PageRecordCount>
</DescribeSQLLogRecordsResponse>
```

#### JSON format

```
{
  "Items":{
    "SQLRecord":[]
  },
  "TotalRecordCount":0,
  "PageNumber":1,
  "RequestId":"9B24F29F-BA7F-47A3-838E-C6A993888388",
  "PageRecordCount":0
}
```

## 12 Network management

### 12.1 AllocateInstancePublicConnection

#### Description

You can call this operation to specify a prefix for the public network connection string of the instance.

#### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to AllocateInstancePublicConnection.
DBInstanceId	String	Yes	The instance ID.
ConnectionStringPrefix	String	Yes	The prefix of the connection string.
Port	String	Yes	The port number. Valid values: 3200 to 3999.

#### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

#### Sample requests

```
https://gpdb.aliyuncs.com/?Action=AllocateInstancePublicConnection
&DBInstanceId=gp-xxxxxxx
&ConnectionStringPrefix=gp-xxxxxxx
&Port=3432
```

```
&< Common request parameters >
```

### Sample responses

#### XML format

```
< AllocateIn stancePubl icConnecti onResponse >
  < RequestId > ADD6EA90 - EECB - 4C12 - 9F26 - 0B6DB58710 EF </
  RequestId >
</ AllocateIn stancePubl icConnecti onResponse >
```

#### JSON format

```
{
  " RequestId ": " ADD6EA90 - EECB - 4C12 - 9F26 - 0B6DB58710 EF "
}
```

## 12.2 DescribeDBInstanceNetInfo

### Description

You can call this operation to query the connection information of the instance.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to DescribeDBInstanceNetInfo.
DBInstanceId	String	Yes	The instance ID.

### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .
DBInstanceNetInfos	List<DBInstanceNetInfo>	The connection information of the instance.

Name	Type	Description
InstanceNetworkType	String	<ul style="list-style-type: none"> <li>· Classic: classic networks</li> <li>· VPC: VPC networks.</li> </ul>

Table 12-1: DBInstanceNetInfo

Name	Type	Description
ConnectionString	String	The DNS connection string
IPAddress	String	The IP address.
IPType	String	<ul style="list-style-type: none"> <li>· For a classic network, the IPType parameter can be Inner or Public.</li> <li>· For a VPC network, the IPType parameter can be Private or Public.</li> </ul>
Port	String	The port information.
VPCId	String	The name of the VPC.
VSwitchId	String	The name of the VSwitch. You can separate multiple values with commas.

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=DescribeDBInstanceNetInfo
&DBInstanceID=gp-xxxxxxx
&<CommonRequestParameters>
```

### Sample responses

#### XML format

```
<DescribeDBInstanceNetInfoResponse>
  <instanceNetworkType>Classic</instanceNetworkType>
  <DBInstanceNetInfos>
    <DBInstanceNetInfo>
      <DBInstanceNetType>1</DBInstanceNetType>
      <connectionString>gp-xxxxxxx.gpdb.rds.aliyuncs.com
    </connectionString>
      <ipAddress>127.0.0.1</ipAddress>
      <port>3432</port>
      <userVisible>1</userVisible>
    </DBInstanceNetInfo>
  </DBInstanceNetInfos>
</DescribeDBInstanceNetInfoResponse>
```



```
</ DBInstance NetInfos >
< RequestId > 7565770E - 7C45 - 462D - BA4A - 8A5396F2CA D1 </
RequestId >
</ DescribeDB InstanceNe tInfoRespo nse >
```

### JSON format

```
{
  " InstanceNe tworkType ": " classic ",
  " DBInstance NetInfos ": {
    " DBInstance NetInfo ": [
      {
        " DBInstance NetType ":" 1 ",
        " connection String ":" gp - xxxxxxxx . gpdb . rds .
aliyuncs . com ",
        " ipAddress ":" 127 . 0 . 0 . 1 ",
        " port ":" 3432 ",
        " userVisibl e ": 1
      }
    ]
  },
  " RequestId ": " 7565770E - 7C45 - 462D - BA4A - 8A5396F2CA D1 "
}
```

## 12.3 ModifyDBInstanceConnectionString

### Description

You can call this operation to modify the connection string and the port.

### Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to <code>ModifyDBInstanceConnectionString</code> .
DBInstanceId	String	Yes	The ID of the instance.
CurrentConnectionString	String	Yes	The current connection string of the instance.

Name	Type	Required	Description
ConnectionStringPrefix	String	Yes	The target connection string.
Port	String	No	The target port.

### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=ModifyDBInstanceConnectionString
&DBInstanceId=gp-xxxxxxx
&CurrentConnectionString=gp-xxxxxxx.gpdb.rds.aliyuncs.com
&ConnectionStringPrefix=gp-xxxxxxxnew
<Common request parameters>
```

### Sample responses

#### XML format

```
<ModifyDBInstanceConnectionStringResponse>
  <RequestId>29B0BF34-D069-4495-92C7-FA6D94528A9E
</ModifyDBInstanceConnectionStringResponse>
```

#### JSON format

```
{
  "RequestId": "29B0BF34-D069-4495-92C7-FA6D94528A9E"
}
```

## 12.4 ModifyDBInstanceNetworkType

### Description

You can call this operation to switch the network type of the instance between a VPC and a classic network.

## Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .
Action	String	Yes	The operation that you want to perform. Set the value to <code>ModifyDBInstanceNetworkType</code> .
DBInstanceId	String	Yes	The ID of the instance.
InstanceNetworkType	String	Yes	The type of the network: <ul style="list-style-type: none"> <li>· VPC</li> <li>· Classic</li> </ul>
VPCId	String	No	The ID of the VPC.
VSwitchId	String	No	The ID of the VSwitch. This parameter is required if the value of VPCId is specified.
PrivateIpAddress	String	No	You can specify the IP address of the VPC to which the VSwitch belongs. If no IP address is specified, the system automatically assigns one IP address based on the VPCId and VSwitchId.

## Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

## Sample requests

```
https://gpdb.aliyuncs.com/?Action=ModifyDBInstanceNetworkType
&DBInstanceId=gp-xxxxxxx
&InstanceNetworkType=VPC
<&CommonRequestParameters>
```

## Sample responses

## XML format

```
<ModifyDBInstanceNetworkTypeResponse>
  <RequestId>2d0c35a9-f5da-44ba-852d-741e27b7eb0b</RequestId>
</ModifyDBInstanceNetworkTypeResponse>
```

## JSON format

```
{
  "RequestId": "2d0c35a9-f5da-44ba-852d-741e27b7eb0b"
}
```

## 12.5 ReleaseInstancePublicConnection

## Description

You can call this operation to release the public network connection string of the instance.

## Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see <a href="#">Common parameters</a> .

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to ReleaseInstancePublicConnection.
DBInstanceId	String	Yes	The ID of the instance.
CurrentConnectionString	String	Yes	The public network connection string of the instance.

### Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see <a href="#">Common response parameters</a> .

### Sample requests

```
https://gpdb.aliyuncs.com/?Action=ReleaseInstancePublicConnection
&DBInstanceId=gp-xxxxxxx
&CurrentConnectionString=gp-xxxxxxx.gpdb.rds.aliyuncs.com
<&CommonRequestParameters>
```

### Sample responses

#### XML format

```
<ReleaseInstancePublicConnectionResponse>
  <RequestId>9CEF7037-4158-4A65-BEC7-2A1541F6FE74
</RequestId>
</ReleaseInstancePublicConnectionResponse>
```

#### JSON format

```
{
  "RequestId": "9CEF7037-4158-4A65-BEC7-2A1541F6FE74"
}
```

# 13 Appendix

---

## 13.1 Error codes

### 13.1.1 Client error codes

Common errors

Error code	Description	HTTP status code
MissingParameter	The input parameter "parameter name" that is mandatory for processing this request is not supplied.	400
InvalidParameter	The specified parameter "Action or Version" is not valid.	400
InvalidAccessKeyId.NotFound	The Access Key ID provided does not exist in our records.	404
IncompleteSignature	The request signature does not conform to Aliyun standards.	400
IllegalTimestamp	The input parameter "Timestamp" that is mandatory for processing this request is not supplied.	400
InvalidOwnerId	The specified OwnerId is not valid.	400
InvalidOwnerAccount	The specified OwnerAccount is not valid.	400
InvalidOwner	OwnerId and OwnerAccount can't be used at one API access.	400
Throttling	Request was denied due to request throttling.	400
InvalidAction	The specified action is not valid.	403
ActionUnauthorized	The specified action is not available for you	403
UnsupportedHTTPMethod	This http method not supported.	403
UnsupportedParameter	The parameter "<parameter name>" is not supported.	400

Error code	Description	HTTP status code
Forbidden.InstanceNotFound	The specified DB instance does not exist.	404
Forbidden.RAM	The user is not authorized to operate the specified resource, or this operation does not support RAM.	403
Forbidden.NotSupportRAM	This action does not support accessed by RAM mode.	403
Forbidden.RiskControl	This operation is forbidden by Aliyun Risk Control system.	403
InsufficientBalance	Your account does not have enough balance.	400
Forbidden.Authentication	This operation is forbidden by Aliyun Realname Authentication system.	403
Invalid<parameter name>. ValueNotSupported	The specified parameter "parameter name" is not valid.	400
Invalid<parameter name>. Malformed	The specified parameter "parameter name n" is not valid.	400
InvalidParameter	The specified parameter "parameter name n " is not valid.	400

### Specific errors

Error code	Description	HTTP status code
InvalidRegionId.NotFound	The DBInstanceId provided does not exist in our records.	404
InvalidSecurityIPList.Duplicate	The Security IP address is not in the available range or occupied.	400
InvalidSecurityIPListLength.Malformed	The security IP address is beyond the available range or is already used.	400
InvalidEngineVersionInRegion.NotAvailable	The EngineVersion in the Region is not available.	403

Error code	Description	HTTP status code
InvalidEngineInRegion. NotAvailable	The Engine in the Region is not available.	403
InvalidDBInstanceClassInRegion. NotAvailable	The DBInstanceClass in the Region is not available.	403
OperationDenied	The resource is out of usage.	403
RegionUnauthorized	There is no authority to create instance in the specified region.	403
QuotaExceeded. CreateInstance	The quota of create instance exceeds.	403
InvalidDBInstanceId. NotFound	The specified DBInstanceId does not exist.	404
MissingParameter	The input parameters "DBInstanceClass" and "DBInstanceStorage" all blank or no change.	400
OperationDenied. DBInstanceType	The operation is not permitted due to type of instance.	400
OperationDenied. DBInstanceStorageReduce	The operation is not permitted due to reduce storage.	403
OperationDenied. DBInstanceStatus	The operation is not permitted due to instance status.	403
DependencyViolation	The operation is not permitted due to instance mount read only or guard instance.	403
InvalidConnectionStringPrefix. Duplicate	The connection string is not in the available range or occupied.	400
QuotaExceeded. SwitchTime	The quota of switch time exceed.	400
OperationDenied. LockMode	The operation is not permitted due to lock of instance.	403
InvalidSecurityIps. Duplicate	The quota of security ip exceeds.	400



Error code	Description	HTTP status code
OperationDenied. .CurrentEngineVersion	The operation is not permitted due to specified current version.	400
OperationDenied. .ReadOnlyDBInstanceLower	The operation is not permitted due to higher read only instance version.	403
OperationDenied. .GuardDBInstanceLower	The operation is not permitted due to higher guard instance version.	403
OperationDenied. .MasterDBInstanceState	The status of the specified master instance does not support this operation.	403
QuotaExceeded. DBName	The quota of db exceeds.	400
InvalidDBName. Duplicate	The specified DB name is invalid or already exists.	400
InvalidParameter. Keyword	The specified DBName is a reserved keyword.	400
OperationDenied. DBStatus	The status of the database does not support this operation.	403
OperationDenied. DBInstanceEngine	The operation is not permitted due to engine of instance.	403
FTPService Unavailable	The service is unavailable now; wait several minutes and try again.	403
QuotaExceeded. Upload	The quota of file exceeds.	403
InvalidFileName. NotCompleted	The specified "FileName" is not completed.	404
InvalidFileName. NotAvailable	The specified "FileName" is not Available.	404
QuotaExceeded. FileSize	The quota of file size exceeds.	403
QuotaExceeded. DBInstanceStorage	The quota of instance storage exceeds.	403
InvalidDBInfo. Malformed	The specified parameter "DBInfo" is not valid or db not exist.	400

Error code	Description	HTTP status code
OperationDenied.Region	The operation is not permitted due to different region.	403
OperationDenied.Engine	The operation is not permitted due to different engine.	403
OperationDenied.DBInstanceId	The operation is not permitted due to DBInstanceId and SourceDBInstanceId is same.	403
InvalidTaskId.NotFound	The ImportId provided does not exist in our records.	400
OperationDenied.IncorrectTaskStatus	The operation is not permitted due to status of import.	403
InvalidAccountName.keyword	The specified AccountName is a reserved keyword.	400
InvalidAccountName.Duplicate	The specified AccountName already exists.	400
QuotaExceeded.AccountName	The quota of account exceeds.	403
OperationDenied.AccountStatus	The status of the account does not support this operation.	403
InvalidDBName.NotFound	The specified database does not exist.	404
OperationDenied.AccountType	The operation is not permitted due to type of account.	403
OperationDenied.BackupJobExists	You cannot perform this operation; a backup job exists.	403
OperationDenied.NoDatabase	The operation is not permitted due to no database.	403
InvalidStartTimeAndEndTime.Malformed	The EndTime must be later than or equal to the StartTime.	400
OperationDenied.BackupJobExists	You cannot perform this operation; a backup job exists.	403
InvalidBackupId.NotFound	The BackupId provided does not exist in our records.	404

Error code	Description	HTTP status code
OperationDenied. NotFoundBackup	The operation is not permitted due to no backup.	403
OperationDenied. BackupStatus	The operation is not permitted due to type of backup.	403
OperationDenied. BackupMethod	The operation is not permitted method of backup.	403
OperationDenied .TempDBInst anceExists	You cannot perform this operation; a temp instance exists.	403
Forbidden. Authentication	The operation is forbidden by Aliyun Realname Authentication System.	403
IncorrectD BInstanceConnType	Current DB instance conn type does not support this operation.	404
IncorrectVpcId. Mismatch	The specified parameter "VpcId" is not valid.	400
IntranetNe tTypeNotExists	Current DB instance net type does not support this operation.	404
InvalidDBI nstanceName. NotFound	The DBInstanceId provided does not exist in our records.	403
InvalidCon nectionMode. ValueNotSupported	The specified parameter "Connection Mode" is not valid.	400
InvalidCon nectionString. Duplicate Specified	Connection string already exists in the Aliyun RDS.	403
InvalidCon nectionString. Duplicate Specified	Connection string or port want to be modified is the same with current net type.	400
InvalidCon nectionStringPrefix .Duplicated	The specified connection string already exists.	403
InvalidCur rentConnec tionString. NotFound	Specified current connection string doesn' t exist.	400

Error code	Description	HTTP status code
InvalidDBInstanceId.NotFound	The specified DBInstanceid does not exist.	400
InvalidDBInstanceId.QuotaExceeded	The quota of instance id exceeds.	400
InvalidDBInstanceNetType.NotFound	The Specified DB instance net type is not found.	404
InvalidDBInstanceNetType.ValueNotSupport	The specified parameter "DBInstanceNetType" is not valid.	400
InvalidDBInstanceType.ValueNotSupport	The specified parameter "DBInstanceType" is not valid.	400
InvalidEngineVersion.Malformed	The specified parameter "EngineVersion" is not valid.	400
InvalidInstanceNetworkType.ValueNotSupported	The specified parameter "InstanceNetworkType" is not valid.	400
InvalidParameter	The specified parameter "dbInstanceId" is not valid.	400
InvalidPort.Malformed	Specified port is not valid.	400
InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	400
InvalidPrivateIpAddress.Mismatch	Specified private IP address is not in the CIDR block of virtual switch.	400
InvalidVPCId.NotFound	The specified connection string or port does not match the current network type.	400
InvalidVSwitchId.Mismatch	Specified instance and virtual switch are not in the same zone.	400
InvalidVSwitchId.NotFound	Specified virtual switch is not found in specified VPC.	400

Error code	Description	HTTP status code
NetTypeExists	Specified net type already existed.	400
NetTypeExists	Specified public net type already existed.	403
OperationDenied. DBInstanceNetType	The network type of the specified instance does not support this operation.	403
OperationDenied. DBInstanceStatus	The specified connection string or port does not match the current network type.	403
OperationDenied. DBInstanceType	The operation is not permitted for the database instance type.	403
OperationDenied. LockMode	The instance is locked.	403
OperationDenied. Switch	Specified instance cannot be switched.	400
OperationDenied. Switch	Specified instance cannot be switched to VPC.	403
OperationDenied. SwitchToVPC	Specified instance cannot be switched to VPC.	403
OperationDenied	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	403
OperationDenied	The vpc cloudinstanceIp is use, please check params.	406
OperationDenied	The vpc service is error, please check params.	400
PARAMETER_ ERROR	The vpc request parameter may not be null.	406
PARAMETER_ MUST_NOT_NULL	The parameter must not be null.	406
PublicConn ectionExists	PublicConnection exists.	403
bpcIzNoNot EqualsRdsMultIzNo	Specified vpc IzNo not equal rds IzNo.	400
IncorrectD BInstanceState	CurrentDB instance state does not support this operation.	403
IncorrectD BInstanceType	CurrentDB instance type does not support this operation.	400

Error code	Description	HTTP status code
IncorrectDBInstanceLockMode	CurrentDB instance lock mode does not support this operation.	400
ParameterNotSupportedForCurrentVersion	Parameter is not supported for current version.	400
InvalidStatusFormat	MigrateTask Status is not valid.	400
EngineVersionNotSupported	EngineVersion specified cannot be replicate with the source DB Instance.	400
EngineNotSupported	Engine specified cannot be supported in the operation.	400
ConnectionModeNotSupported	ConnectionMode specified cannot be replicate with the source DB Instance.	400
InvalidConfigurationValueMalformed	Specified ConfigurationValue is not valid.	403
InvalidConfigurationValueStatusMalformed	Specified ProxyConfigurationValue (status) is not valid.	403
InvalidConfigurationValueOtherMalformed	Specified ProxyConfigurationValue (check_interval_seconds or max_failed_login_attempts or blocking_seconds) is not valid.	403
ProxyConnectionPersistExists	Specified same ProxyConnectionPersist already exists.	400
ProxyConnectionPersistNotFound	Specified same ProxyConnectionPersist already exists.	400
ProxyConnectionPersistNotFound	Specified ProxyConnectionPersist is not found.	400
ProxyConnectionPersistParametersInvalid	ProxyConnectionPersist parameter out of range	400

Error code	Description	HTTP status code
InvalidConfigValue	ProxyConnectionPersist parameter config table not exists or data error.	400
InvalidDBInstance.NotFound	Specified instance does not exist or not support.	400
ProxyConnectionPersist.NotFound	Specified ProxyConnectionPersist is not found.	400
ProxyConnectionPersistParametersInvalid	ProxyConnectionPersist parameter out of range.	400
InvalidConfigValue	Parameter config table not exists or data error.	400

### 13.1.2 Server error codes

Error code	Description	HTTP status code
ServiceUnavailable	The request has failed due to a temporary failure of the server.	503
InternalServerError	The request processing has failed due to some unknown error, exception or failure.	500

## 13.2 Instance types

Currently, AnalyticDB for PostgreSQL provides two instance type families.

- **High-performance:** The type names start with `gpdb.group.segsdx`. This instance type family offers better I/O performance.
- **High-capacity:** The type names start with `gpdb.group.seghdx`. This instance type family offers larger and more cost-effective storage space.

We recommend that you choose the appropriate instance type based on the storage space and compute capacity as required.

AnalyticDB for PostgreSQL supports OSS-based external tables and data compression in external storage through gzip. You can store the data that are not involved in real-time computing to external storage to save costs.

### Type specification

The specification for high-performance instances is shown in the table as follows.

High-performance type family	CPU	Memory	Storage space
gpdb.group.segsdx1	1 Core	8 GB	80 GB SSD
gpdb.group.segsdx2	2 cores	16 GB	160 GB SSD
gpdb.group.segsdx16	16 Cores	128 GB	1.28 TB SSD

The specification for high-capacity instances is shown in the following table.

High-capacity type family	CPU	Memory	Storage space
gpdb.group.seghdx4	4 Cores	32 GB	2 TB HDD
gpdb.group.seghdx36	36 Cores	288 GB	18 TB HDD

## 13.3 Performance parameters

Table 13-1: Performance parameters

API parameter	Description
Gpdb_IOPS	The IOPS (I/O requests per second, data format: data_iops&write_iops&read_iops) of the instance.
IOPSUsage	The IOPS usage rate by the instance.
CpuUsage	The CPU usage rate by the instance.
ConnectionUsage	The connection usage rate by the instance.
Gpdb_session	The number of sessions connected to the instance.



API parameter	Description
Gpdb_SpaceUsage	The disk usage by the instance (MB, data format: ins_size&data_size&log_size&other_size).
DiskUsage	The disk usage rate by the instance.
Gpdb_BPS	The disk usage by the instance (BPS, data format: data_bps&write_bps&read_bps).
BPSUsage	The BPS usage rate by the instance.
MemoryUsage	The memory usage rate by the instance.
Gpdb_memory	The memory usage by the instance (MB).

## 13.4 Instance statuses

Table 13-2: Instance statuses

Status	Description
Creating	The instance is being created.
Running	The instance is running.
Deleting	The instance is being deleted.
Rebooting	The instance is restarting.
DBInstanceClassChanging	The instance specification is being changed.
Transferring	The instance is being migrated.
EngineVersionUpgrading	The engine version is being upgraded.
TransferringToOtherInstance	The data is being transferred to other instances of AnalyticDB for PostgreSQL.
GuardDBInstanceCreating	The disaster recovery instance is being created.
Restoring	The backup is being restored.
Importing	The data is being imported.
ImportingFromOtherInstance	The data is being imported from other instances of AnalyticDB for PostgreSQL.
DBInstanceNetTypeChanging	The network type is being changed.
GuardSwitching	The environment is being switched to the disaster recovery instance.