

Alibaba Cloud

AnalyticDB for PostgreSQL API Reference

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Document conventions









Style	Description	Example
 Danger	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: Resetting will result in the loss of user configuration data.
 Warning	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 Warning: Restarting will cause business interruption. About 10 minutes are required to restart an instance.
 Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	 Notice: If the weight is set to 0, the server no longer receives new requests.
 Note	A note indicates supplemental instructions, best practices, tips, and other content.	 Note: You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click Settings> Network> Set network type .
Bold	Bold formatting is used for buttons, menus, page names, and other UI elements.	Click OK .
Courier font	Courier font is used for commands	Run the <code>cd /d C:/window</code> command to enter the Windows system folder.
<i>Italic</i>	Italic formatting is used for parameters and variables.	<code>bae log list --instanceid</code> <i>Instance_ID</i>
[] or [a b]	This format is used for an optional value, where only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	This format is used for a required value, where only one item can be selected.	<code>switch {active stand}</code>

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1.API overview

Instance management

Operation	Description
CreateDBInstance	Creates an instance
DeleteDBInstance	Deletes an instance.
DescribeDBInstanceAttribute	Queries details about an instance.
DescribeDBInstances	Queries the instances in a region.
DescribeRegions	Queries the available regions and zones.
DescribeResourceUsage	Queries the resource usage of an instance.
ModifyDBInstanceDescription	Modifies the description of an instance.
ModifyDBInstanceMaintainTime	Modifies the maintenance window of an instance.
RestartDBInstance	Restarts an instance.
UpgradeDBInstance	Changes the type of an instance
UpgradeDBVersion	Upgrades the kernel version of an instance.
DescribeDBInstancePerformance	Queries the performance data of an instance.

Database management

Operation	Description
DeleteDatabase	Deletes a database from an instance.

Account management

Operation	Description
CreateAccount	Creates an account on an instance.
DescribeAccounts	Queries the accounts created on an instance.
ModifyAccountDescription	Modifies the description of a database on an instance.
ResetAccountPassword	Resets the password of an account on an instance.

Security management

Operation	Description
DescribeDBInstanceIPArrayList	Queries an IP address whitelist of an instance.
ModifySecurityIps	Modifies an IP address whitelist of an instance.

Log management

Operation	Description
DescribeSQLCollectorPolicy	Queries the status of the SQL audit function for an instance.
DescribeSQLLogFiles	Queries the SQL audit log files of an instance.
DescribeSQLLogRecords	Queries the SQL audit logs generated by an instance over a specific time range.
ModifySQLCollectorPolicy	Modifies the status of the SQL audit function for an instance.

Network management

Operation	Description
AllocateInstancePublicConnection	Allocates a public endpoint to an instance.
DescribeDBInstanceNetInfo	Queries the connection information of an instance.
ModifyDBInstanceNetworkType	Changes the network type of an instance
ReleaseInstancePublicConnection	Releases the public endpoint of 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.

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 2016-05-03.
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 Sign signatures .
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 ISO8601 standard and uses UTC time. The format is as follows: <pre>YYYY-MM-DDThh:mm:ssZ</pre> 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=Pc5WB8gokVn0xfeu%2FZV%2BiNM1dgl%3D  
&SignatureMethod=HMAC-SHA1  
&SignatureNonce=15215528852396  
&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-AC049166F216</RequestId>  
<!--Return result data-->  
</API name+Response>
```

4. Responses

After you call an API operation, a response is returned in a unified format. A returned HTTP status code of `2xx` indicates that the call succeeded. A returned HTTP status code of `4xx` or `5xx` indicates that the call failed.

Success responses are returned in the XML or JSON format. You can enter a parameter to specify the response format when you call an API operation from an external system. The default format is XML. Sample responses in this topic are formatted to be reader-friendly. Actual responses are not formatted with line feeds, indentation, or other layouts.

Sample success responses

XML format

A response in the XML format includes a message that indicates whether the request succeeded and the specific service data. Example:

```
<? xml version="1.0" encoding="utf-8"? >
<!--Result Root Node-->
<API Operation Name+Response>
<!--Return Request Tag-->
<RequestId>4C467B38-3910-447D-87BC-AC049166F216</RequestId>
<!--Return Result Data-->
</API Operation Name+Response>
```

JSON format

```
{
  "RequestId": "4C467B38-3910-447D-87BC-AC049166F216",
  /* Return result */
}
```

Sample error responses

If the call to an API operation failed, no results are returned. You can locate the errors by following the instructions provided in [Client error codes](#).

If the call to an API operation failed, an HTTP status code of `4xx` or `5xx` is returned. The body of the returned message contains the specific error code and error message. The message body also contains the globally unique ID of the request (RequestId) and the ID of the requested site (HostId). If you cannot locate an error, contact Alibaba Cloud customer service and provide the HostId and RequestId so the error can be located as soon as possible.

XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<Error>
<RequestId>8906582E-6722-409A-A6C4-0E7863B733A5</RequestId>
<HostId>gpdb.aliyuncs.com</HostId>
<Code>InvalidAction</Code>
<Message>The specified action is not supported. </Message>
</Error>
```

JSON format


```
{
  "RequestId": "7463B73D-35CC-4D19-A010-6B8D65D242EF",
  "HostId": "gpdb.aliyuncs.com",
  "Code": "InvalidAction",
  "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.
 - i. 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.

- ii. 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.

- iii. Connect the encoded parameter names and values with equal signs (=).
 - iv. 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:


```
StringToSign= HTTPMethod + "&" + percentEncode( "/" ) + "&" +  
percentEncode(CanonicalizedQueryString)
```

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.

3. 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.

4. Encode the HMAC value into a string based on Base64 encoding rules to obtain the signature value.
5. 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%253A33%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&AccessKeyId=testid&Action=DescribeDBInstances&SignatureMethod=HMAC-SHA1&RegionId=region1&SignatureNonce=NwDaxvLU6tFE0DVb&Version=2012-09-13&SignatureVersion=1.0&Signature=GfQRtWbwde8sp7q9lBgZyutVht8%3d
```

6. Service linked role

This topic describes the application scenarios of the service linked role `AliyunServiceRoleForADBPG` of AnalyticDB for PostgreSQL and provides guidance on how to delete the role.

Application scenarios

To implement some features, AnalyticDB for PostgreSQL uses the service linked role named `AliyunServiceRoleForADBPG` to access other Alibaba Cloud services. The service linked role is a type of Resource Access Management (RAM) role. For more information, see [Service linked roles](#).

Role description

Role name: `AliyunServiceRoleForADBPG`

Permission policy attached to the role: `AliyunServiceRolePolicyForADBPG`

Permission description:


```

{
  "Version": "1",
  "Statement": [
    {
      "Action": [
        "ecs:CreateNetworkInterface",
        "ecs>DeleteNetworkInterface",
        "ecs:AttachNetworkInterface",
        "ecs:DetachNetworkInterface",
        "ecs:DescribeNetworkInterfaces",
        "ecs:CreateNetworkInterfacePermission",
        "ecs:DescribeNetworkInterfacePermissions",
        "ecs:CreateSecurityGroup",
        "ecs>DeleteSecurityGroup",
        "ecs:DescribeSecurityGroupAttribute",
        "ecs:DescribeSecurityGroups",
        "ecs:ModifySecurityGroupAttribute",
        "ecs:AuthorizeSecurityGroup",
        "ecs:AuthorizeSecurityGroupEgress",
        "ecs:RevokeSecurityGroup",
        "ecs:RevokeSecurityGroupEgress"
      ],
      "Resource": "*",
      "Effect": "Allow"
    },
    {
      "Action": "ram:DeleteServiceLinkedRole",
      "Resource": "*",
      "Effect": "Allow",
      "Condition": {
        "StringEquals": {
          "ram:ServiceName": "adbpg.aliyuncs.com"
        }
      }
    }
  ]
}

```

Delete the service linked role

Before you delete the AliyunServiceRoleForADBPG role, release all the instances that the role is bound to.

- For information about how to release an AnalyticDB for PostgreSQL instance, see [Release an instance](#).
- For information about how to delete a service linked role, see [Delete a service linked role](#).

7. Use RAM for resource authorization

7.1. 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.


7.2. Authorized resource type through RAM

Currently, RAM only supports authorizing DBInstance.

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

Resource description

Resource type	Description in authorization policy
DBInstance	<pre>acs:gpdb:\$regionid: \$accountid:dbinstance/\$dbinstanceid acs:gpdb:\$regionid:\$accountid:dbinstance/* acs:gpdb:* : *:dbinstance/*</pre>

 **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 "*".

7.3. 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).

7.4. 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 [Authentication rules for APIs](#).

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
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

Action	Authentication rule
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
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

8.Instance management

8.1. CreateDBInstance

You can call the CreateDBInstance operation to create an AnalyticDB for PostgreSQL instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateDBInstance	The operation that you want to perform. Set the value to CreateDBInstance.
ClientToken	String	Yes	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request.
DBInstanceClass	String	Yes	gpdb.group.segment1	The instance type. For more information, see Instance types .
DBInstanceGroupCount	String	Yes	2	The number of compute nodes in the AnalyticDB for PostgreSQL instance.
Engine	String	Yes	gpdb	The database engine that the instance runs. Set the value to gpdb.
EngineVersion	String	Yes	4.3	The version of the database engine. Set the value to 4.3.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance, such as cn-hangzhou. You can call the DescribeRegions operation to query the most recent region list.
SecurityIPList	String	Yes	127.0.0.1	The IP addresses that are allowed to access the instance. Default value: 127.0.0.1 .

Parameter	Type	Required	Example	Description
ZoneId	String	Yes	cn-hangzhou-i	The ID of the zone, such as cn-hangzhou-d. You can call the DescribeRegions operation to query the most recent region list.
DBInstanceDescription	String	No	gp-xxxxxx	The description of the instance. The description cannot exceed 256 characters in length.
PayType	String	No	Prepaid	The billing method of the instance. Valid values: <ul style="list-style-type: none"> Postpaid: pay-as-you-go. This is the default value. Prepaid: subscription.
Period	String	No	Month	The unit of the subscription period.
UsedTime	String	No	1	The subscription period.
InstanceNetworkType	String	No	VPC	The network type of the instance. Set the value to VPC.
VPCId	String	No	vpc-xxxxxxx	If you set InstanceNetworkType to VPC, you must also specify the VPCId parameter. The specified region of the VPC must be the same as the RegionId value.
VSwitchId	String	No	vsw-xxxxxxxx	If you set InstanceNetworkType to VPC, you must also specify the VSwitchId parameter. The specified zone of the VSwitch must be the same as the ZoneId value.
PrivateIpAddress	String	No	127.0.0.1	The private IP address of the instance.

Response parameters

Parameter	Type	Example	Description
ConnectionString	String	gp-xxxxxxx.gpdb.rds.aliyuncs.com	The endpoint of the instance.
DBInstanceId	String	gp-xxxxxxxx	The ID of the instance.
OrderId	String	xxxxxxx	The ID of the order.
Port	String	3432	The port used to connect to the instance.
RequestId	String	5414A4E5-4C36-4461-95FC-23757A20B5F8	The ID of the request.

Examples

Sample requests

```
https://gpdb.aliyuncs.com/?Action=CreateDBInstance
&ClientToken=0c593ea1-3bea-11e9-b96b-88e9fe637760
&Engine=gpdb
&EngineVersion=4.3
&RegionId=cn-hangzhou
&SecurityIPList=127.0.0.1
&ZoneId=cn-hangzhou-i
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateDBInstanceResponse>
<dbInstanceId>gp-xxxxxxx</dbInstanceId>
<orderId>xxxxxxx</orderId>
<connectionString>gp-xxxxxxx.gpdb.rds.aliyuncs.com</connectionString>
<port>3432</port>
<RequestId>5414A4E5-4C36-4461-95FC-23757A20B5F8</RequestId>
</CreateDBInstanceResponse>
```

JSON format


```
{
  "dbInstanceId": "gp-xxxxxxx",
  "orderId": "xxxxxxx",
  "connectionString": "gp-xxxxxxx.gpdb.rds.aliyuncs.com",
  "port": "3432",
  "RequestId": "5414A4E5-4C36-4461-95FC-23757A20B5F8"
}
```

Error code

For a list of error codes, visit the [API Error Center](#).

8.2. CreateECSDBInstance

You can call this operation to create an AnalyticDB for PostgreSQL instance that uses Elastic Compute Service (ECS) instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateECSDBInstance	The operation that you want to perform. Set the value to CreateECSDBInstance.
ClientToken	String	Yes	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request.
Engine	String	Yes	gpdb	The database engine. Set the value to gpdb.
EngineVersion	String	Yes	4.3	The version of the database engine. Set the value to 4.3.
InstanceSpec	String	Yes	gpdb.group.seg sdx1	The instance type. For more information, see Instance types .

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region.
SecurityIPList	String	Yes	127.0.0.1	The IP addresses that are allowed to access the instance. Default value: 127.0.0.1 .
SegNodeNum	Integer	Yes	4	The number of nodes.
SegStorageType	String	Yes	ESSD	The type of disks.
StorageSize	Integer	Yes	200	The storage capacity. Unit: GB.
ZoneId	String	Yes	cn-hangzhou	The ID of the zone. For example, cn-hangzhou-d. You can call DescribeRegions to query available zones.
DBInstanceDescription	String	No	gp-xxxxxxxxxx	The description of the instance. The description cannot exceed 256 characters in length.
PayType	String	No	Prepaid	The billing method of the instance. Valid values: <ul style="list-style-type: none"> Postpaid: pay-as-you-go Prepaid: subscription
Period	String	No	Month	The unit of the subscription period.
UsedTime	String	No	1	The subscription period.
InstanceNetworkType	String	No	VPC	The network type of the instance. Set the value to VPC.
VPCId	String	No	vpc-xxxxxxxxxx	If you set InstanceNetworkType to VPC, you must also specify the VPCId parameter. The specified region of the VPC must be the same as the RegionId value.

Parameter	Type	Required	Example	Description
VSwitchId	String	No	vsw-xxxxxxxx	If you set InstanceNetworkType to VPC, you must also specify the VSwitchId parameter. The specified zone of the VSwitch must be the same as the ZoneId value.
PrivateIpAddress	String	No	127.0.0.1	The private IP address of the instance.

Response parameters

Parameter	Type	Example	Description
ConnectionString	String	gp-xxxxxxx.gpdb.rds.aliyuncs.com	The endpoint of the instance.
DBInstanceId	String	gp-xxxxxxxx	The ID of the instance.
OrderId	String	xxxxxxxx	The ID of the order.
Port	String	3432	The port used to connect to the instance.
RequestId	String	5414A4E5-4C36-4461-95FC-23757A20B5F8	The ID of the request.

Examples

Sample requests

```

http(s)://[Endpoint]/? Action=CreateECSDatabaseInstance
&ClientToken=0c593ea1-3bea-11e9-b96b-88e9fe637760
&Engine=gpdb
&EngineVersion=4.3
&InstanceSpec=gpdb.group.segsdx1
&RegionId=cn-hangzhou
&SecurityIPList=127.0.0.1
&SegNodeNum=4
&SegStorageType=ESSD
&StorageSize=200
&ZoneId=cn-hangzhou
&<Common request parameters>

```

Sample success responses

XML format

```

<RequestId>5414A4E5-4C36-4461-95FC-23757A20B5F8</RequestId>
<DBInstanceId>gp-xxxxxxxx</DBInstanceId>
<Port>3432</Port>
<OrderId>xxxxxxxx</OrderId>
<ConnectionString>gp-xxxxxxx.gpdb.rds.aliyuncs.com</ConnectionString>

```

JSON format

```

{"RequestId":"5414A4E5-4C36-4461-95FC-23757A20B5F8","DBInstanceId":"gp-xxxxxxxx","Port":"3432","
OrderId":"xxxxxxxx","ConnectionString":"gp-xxxxxxx.gpdb.rds.aliyuncs.com"}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

8.3. 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 Common parameters .

Name	Type	Required	Description
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 Common response parameters .

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-B382721EEE64"
```

8.4. DescribeDBInstanceAttribute

Description

Queries the details of an instance.

Request parameters

Parameter	Type	Required	Description
<Common request parameters>	N/A	Yes	For more information, see Common parameters .

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeDBInstanceAttribute.
DBInstanceID	String	Yes	The ID of the instance.

Response parameters

Parameter	Type	Description
<Common response parameters>	N/A	For more information, see Common response parameters .
Items	List<DBInstanceAttribute>	The details of the instance.

DBInstanceAttribute parameters

Parameter	Type	Description
AvailabilityValue	String	The availability of the instance. Unit: %.
ConnectionMode	String	The access mode of the instance. Valid values: <ul style="list-style-type: none"> Performance: standard mode Safety: safe mode
ConnectionString	String	The endpoint of the instance.
CreationTime	String	The time when the instance was created. The time is in the YYYY-MM-DDThh:mm:ssZ format, such as 2011-05-30T12:11:4Z.
DBInstanceClass	String	The instance type.
DBInstanceClassType	String	The instance family. Valid values: <ul style="list-style-type: none"> s: shared instance x: general-purpose instance d: dedicated instance h: dedicated host instance
DBInstanceCpuCores	String	The number of CPU cores.

Parameter	Type	Description
DBInstanceDescription	String	The description of the instance.
DBInstanceDiskMBPS	Long	The maximum disk throughput of compute groups. Unit: Mbit/s.
DBInstanceGroupCount	String	The number of compute groups.
DBInstanceId	String	The ID of the instance.
DBInstanceMemory	Long	The memory capacity of the instance. Unit: MB.
DBInstanceNetType	String	The type of the network over which you access the instance. Valid values: <ul style="list-style-type: none"> • Internet: the Internet • Intranet: internal network
DBInstanceStatus	String	The status of the instance. For more information, see Instance statuses .
DBInstanceStorage	Long	The disk space of the instance. Unit: GB.
Engine	String	The database engine used by the instance.
EngineVersion	String	The version of the database engine used by the instance.
ExpireTime	String	The expiration time of the instance.
HostType	String	The disk type of compute groups. Valid values: <ul style="list-style-type: none"> • 0: SSD • 1: SATA
InstanceNetworkType	String	The network type of the instance. Valid values: <ul style="list-style-type: none"> • Classic: classic network • VPC: Virtual Private Cloud

Parameter	Type	Description
LockMode	String	The locking mode of the instance. Valid values: <ul style="list-style-type: none"> • Unlock: The instance is not locked. • ManualLock: The instance is locked manually. • LockByExpiration: The instance is locked automatically after it expires. • LockByRestoration: The instance is locked automatically before a rollback. • LockByDiskQuota: The instance is locked automatically if its space is used up.
MaintainEndTime	String	The end time of the maintenance window for the instance.
MaintainStartTime	String	The start time of the maintenance window for the instance.
MaxConnections	Integer	The maximum number of concurrent connections to the instance.
PayType	String	The billing method of the instance. Valid values: <ul style="list-style-type: none"> • Postpaid: pay-as-you-go • Prepaid: subscription
Port	String	The port of the instance.
RegionId	String	The region ID of the instance.
SecurityIPList	String	The whitelist of IP addresses that are allowed to access the instance.
VpcId	String	The ID of the VPC where ClassicLink is enabled.
ZoneId	String	The zone ID of the instance.

Sample requests


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

Sample responses

XML format

```
<DescribeDBInstanceAttributeResponse>
<RequestId>B4CAF581-2AC7-41AD-8940-D56DF7AADF5B</RequestId>
<Items>
<DBInstanceAttribute>
<DBInstanceDiskMBPS>300</DBInstanceDiskMBPS>
<ConnectionString>gp-xxxxxxx.gpdb.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>
<EngineVersion>4.3</EngineVersion>
<DBInstanceStatus>Running</DBInstanceStatus>
<PayType>Prepaid</PayType>
<LockMode>Unlock</LockMode>
<DBInstanceNetType>1</DBInstanceNetType>
<MaintainEndTime>22:00Z</MaintainEndTime>
<DBInstanceClass>gpdb.group.segdx2</DBInstanceClass>
<DBInstanceId>gp-xxxxxxx</DBInstanceId>
<DBInstanceClassType>x</DBInstanceClassType>
<InstanceNetworkType>Classic</InstanceNetworkType>
<DBInstanceDescription>gp-xxxxxxx</DBInstanceDescription>
<DBInstanceStorage>160</DBInstanceStorage>
<CreationTime>2018-06-27T12:07:10Z</CreationTime>
<Port>3432</Port>
<ExpireTime>2019-06-27T16:00:00Z</ExpireTime>
<RegionId>cn-hangzhou</RegionId>
<AvailabilityValue>100.0%</AvailabilityValue>
<DBInstanceCpuCores>2</DBInstanceCpuCores>
<SecurityIPList>127.0.0.1</SecurityIPList>
</DBInstanceAttribute>
</Items>
</DescribeDBInstanceAttributeResponse>
```

JSON format

```
{
  "Items":{
    "DBInstanceAttribute":[
      {
        "DBInstanceDiskMBPS":300,
        "ConnectionString":"gp-xxxxxxx.gpdb.rds.aliyuncs.com",
        "ZoneId":"cn-hangzhou-e",
        "ConnectionMode":"Performance",
        "VpcId":"vpc-xxxxxxx",
        "Engine":"gpdb",
        "MaxConnections":500,
        "MaintainStartTime":"18:00Z",
        "DBInstanceGroupCount":"2",
        "HostType":"0",
        "DBInstanceMemory":16384,
        "EngineVersion":"4.3",
        "DBInstanceStatus":"Running",
        "PayType":"Prepaid",
        "LockMode":"Unlock",
        "DBInstanceNetType":"1",
        "MaintainEndTime":"22:00Z",
        "DBInstanceClass":"gpdb.group.segsdx2",
        "DBInstanceId":"gp-xxxxxxx",
        "DBInstanceClassType":"x",
        "InstanceNetworkType":"Classic",
        "DBInstanceDescription":"gp-xxxxxxx",
        "DBInstanceStorage":160,
        "CreationTime":"2018-06-27T12:07:10Z",
        "Port":"3432",
        "ExpireTime":"2019-06-27T16:00:00Z",
        "RegionId":"cn-hangzhou",
        "AvailabilityValue":"100.0%",
        "DBInstanceCpuCores":2,
        "SecurityIPList":"127.0.0.1"
      }
    ]
  },
  "RequestId":"B4CAF581-2AC7-41AD-8940-D56DF7AADF5B"
}
```

8.5. DescribeDBInstances

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

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDBInstances	The operation that you want to perform. Set the value to DescribeDBInstances.
RegionId	String	Yes	cn-hangzhou	The ID of the region.
DBInstanceDescription	String	No	gp-xxxxxxx	The description of the instance.
InstanceNetworkType	String	No	VPC	The network type. Valid values: <ul style="list-style-type: none"> VPC Classic If you do not specify this parameter, instances of all network types are returned.
DBInstanceIds	String	No	gp-xxxxxxxxx, gp-xxxxxxx	The ID of the instance. Separate multiple IDs with commas (,).
Tag.N.Key	String	No	key1	The key of the tag.
Tag.N.Value	String	No	value1	The value of the tag.
PageSize	Integer	No	50	The number of entries to return on each page. Valid values: 30, 50, and 100. Default value: 30.
PageNumber	Integer	No	1	The number of the page to return. Valid values: any non-zero positive integer. The default value is 1.

Response parameters

Parameter	Type	Example	Description
Items	Array		The details of the instance.
DBInstance			
ConnectionMode	String	Standard	The access mode of the instance. Valid values: <ul style="list-style-type: none"> Standard Safe
CreateTime	String	2019-09-08T16:00:00Z	The time when the instance was created.
DBInstanceDescription	String	gp-xxxxxxxxxx	The description of the instance.
DBInstanceID	String	gp-xxxxxxxxxx	The ID of the instance.
DBInstanceNetType	String	Internet	The type of network connection to be used by the instance.
DBInstanceStatus	String	Running	The status of the instance. For more information, see Instance statuses .
Engine	String	gpdb	The engine type of the instance.
EngineVersion	String	4.3	The version of the database engine.
ExpireTime	String	2019-09-08T16:00:00Z	The time when the instance is scheduled to expire. Pay-as-you-go instances do not expire.
InstanceDeployType	String	public	The type of the cluster. Valid values: <ul style="list-style-type: none"> cell: indicates an exclusive cluster public: indicates a shared cluster
InstanceNetworkType	String	VPC	The network type of the instance. Valid values: <ul style="list-style-type: none"> VPC Classic

Parameter	Type	Example	Description
LockMode	String	Unlock	<p>The locking mode of the instance. Valid values:</p> <ul style="list-style-type: none"> • Unlock: The instance is not locked. • ManualLock: The instance is locked manually. • LockByExpiration: The instance is locked automatically after it expires. • LockByRestoration: The instance is locked automatically before a rollback. • LockByDiskQuota: The instance is locked automatically when the disk space is full.
LockReason	String	Unknow	The reason why the instance is locked.
PayType	String	Prepaid	<p>The billing method of the instance. Valid values:</p> <ul style="list-style-type: none"> • Postpaid: pay-as-you-go • Prepaid: subscription
RegionId	String	cn-hangzhou	The ID of the region.
Tags	Array		The tags of the instance.
Tag			
Key	String	key1	The key of the tag.
Value	String	value1	The value of the tag.
VSwitchId	String	vsw-xxxxxxxxxx	The ID of the VSwitch.
VpcId	String	vpc-xxxxxxxxxx	The ID of the VPC.
ZoneId	String	cn-hangzhou	The ID of the zone.
PageNumber	Integer	1	The number of the returned page.

Parameter	Type	Example	Description
PageRecordCount	Integer	2	The number of records on the current page.
RequestId	String	BBE00C04-A3E8-4114-881D-0480A72CB92E	The ID of the request.
TotalRecordCount	Integer	2	The total number of records.

Examples

Sample requests

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

Sample success responses

XML format

```
<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>2019-06-27T16:00:00Z</ExpireTime>
<CreateTime>2018-06-27T12:07:11Z</CreateTime>
<RegionId>cn-hangzhou</RegionId>
<EngineVersion>4.3</EngineVersion>
<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/>
<DBInstanceStatus>Running</DBInstanceStatus>
<PayType>Postpaid</PayType>
</DBInstance>
</Items>
<PageNumber>1</PageNumber>
<TotalRecordCount>2</TotalRecordCount>
<RequestId>BBE00C04-A3E8-4114-881D-0480A72CB92E</RequestId>
<PageRecordCount>2</PageRecordCount>

```

JSON format

```

{
  "Items":{
    "DBInstance":[
      {
        "LockMode":"Unlock",
        "DBInstanceNetType":"1",
        "DBInstanceId":"gp-xxxxxxx",
        "ZoneId":"cn-hangzhou-e",
        "DBInstanceDescription":"gpdb_test",
        "InstanceNetworkType":"Classic",
        "VSwitchId":"vsw-xxxxxxx",
        "VpcId":"vpc-xxxxxxx",
        "Engine":"gpdb",
        "ExpireTime":"2019-06-27T16:00:00Z",
        "CreateTime":"2018-06-27T12:07:11Z",
        "RegionId":"cn-hangzhou",
        "EngineVersion":"4.3".
      }
    ]
  }
}

```



```
"LockReason": "",
"DBInstanceStatus": "Running",
"PayType": "Prepaid"
},
{
"LockMode": "Unlock",
"DBInstanceNetType": "1",
"DBInstanceId": "gp-xxxxxxx",
"ZoneId": "cn-hangzhou-e",
"DBInstanceDescription": "gp-xxxxxxx",
"InstanceNetworkType": "Classic",
"VSwitchId": "vsw-xxxxxxx",
"VpcId": "vpc-xxxxxxx",
"Engine": "gpdb",
"ExpireTime": "2999-09-08T16:00:00Z",
"CreateTime": "2018-06-27T11:51:46Z",
"RegionId": "cn-hangzhou",
"EngineVersion": "4.3",
"LockReason": "",
"DBInstanceStatus": "Running",
"PayType": "Postpaid"
}
]
},
"PageNumber": 1,
"TotalRecordCount": 2,
"RequestId": "BBE00C04-A3E8-4114-881D-0480A72CB92E",
"PageRecordCount": 2
}
```

Error code

For a list of error codes, visit the [API Error Center](#).

8.6. 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 Common parameters .
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 Common response parameters .
Regions	List<Region>	The list of regions.

Region parameters

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

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-9F14-294CEA008A9F</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-zhangjiakou-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>
```

```
</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>
</Regions>
</DescribeRegionsResponse>

```

JSON format

```

{
  "RequestId": "FF8EB261-5447-4B1B-9F14-294CEA008A9F",
  "Regions": {
    "Region": [
      {
        "RegionId": "cn-beijing",
        "Zones": {
          "Zone": [
            {
              "VpcEnabled": true,
              "ZoneId": "cn-beijing-c"
            }
          ]
        }
      }
    ]
  }
}

```

```
},
{
  "VpcEnabled":true,
  "ZoneId":"cn-beijing-g"
}
]
},
{
  "RegionId":"cn-zhangjiakou",
  "Zones":{
    "Zone":[
      {
        "VpcEnabled":true,
        "ZoneId":"cn-zhangjiakou-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"
      }
    ]
  }
}
```

```

}
]
}
}
]
}
}
}

```

8.7. DescribeResourceUsage

Description

Queries the disk space usage of an instance.

Request parameters

Parameter	Type	Required	Description
<Common request parameters>	N/A	Yes	For more information, see Common parameters .
Action	String	Yes	The operation that you want to perform. Set the value to DescribeResourceUsage.
DBInstanceId	String	Yes	The ID of the instance.

Response parameters

Parameter	Type	Description
<Common response parameters>	N/A	For more information, see Common response parameters .
DBInstanceId	String	The ID of the instance.
Engine	String	The database engine used by the instance.
DiskUsed	Integer	The total space occupied by data files and log files. Unit: bytes. The value -1 indicates that no space is occupied by data or log files.

Parameter	Type	Description
DataSize	Integer	The space occupied by data files. Unit: bytes. The value -1 indicates that no space is occupied by data files.
LogSize	Integer	The space occupied by log files. Unit: bytes. The value -1 indicates that no space is occupied by log files.
BackupSize	Integer	The space occupied by backup files. Unit: bytes. The value -1 indicates that no space is occupied by backup files.

Sample requests

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

Sample responses

XML format

```
<DescribeResourceUsageResponse>
<DBInstanceId>gp-xxxxxxx</DBInstanceId>
<RequestId>860FBA9E-BFFD-493E-91A1-2349B9D74AE7</RequestId>
<LogSize>201326592</LogSize>
<DataSize>83886080</DataSize>
<BackupSize>26624</BackupSize>
<Engine>gpdb</Engine>
<DiskUsed>285212672</DiskUsed>
</DescribeResourceUsageResponse>
```

JSON format

```
{
  "DBInstanceId": "gp-xxxxxxx",
  "RequestId": "860FBA9E-BFFD-493E-91A1-2349B9D74AE7",
  "LogSize": 201326592,
  "DataSize": 83886080,
  "BackupSize": 26624,
  "Engine": "gpdb",
  "DiskUsed": 285212672
}
```

8.8. 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 Common parameters .
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 Common response parameters .

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-A892B472562F</RequestId>
</ModifyDBInstanceDescriptionResponse>
```

JSON format

```
{
  "RequestId": "107BE202-D1A2-479E-98E0-A892B472562F"
}
```

8.9. 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 Common parameters .
Action	String	Yes	The operation that you want to perform. Set the value to <code>ModifyDBInstanceMaintainTime</code> .
DBInstanceId	String	Yes	The ID of the instance.
StartTime	String	Yes	The start time of the maintenance window. For example, <code>02:00Z</code> .

Name	Type	Required	Description
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 Common response parameters .

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-CEBF67429CCA</RequestId>
</ModifyDBInstanceMaintainTimeResponse>
```

JSON format

```
{
  "RequestId": "CA9A34C8-AC95-413B-AC6A-CEBF67429CCA"
}
```

8.10. RestartDBInstance

Description

Restarts an instance.

Request parameters

Parameter	Type	Required	Description
<Common request parameters>	N/A	Yes	For more information, see Common parameters .
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

Parameter	Type	Description
<Common response parameters>	N/A	For more information, see Common response parameters .

Sample requests

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

Sample responses

XML format

```
<RestartDBInstance>
<RequestId>A7356493-7141-4393-8951-CDA8AB5D67EC</RequestId>
</RestartDBInstance>
```

JSON format

```
{
  "RequestId": "A7356493-7141-4393-8951-CDA8AB5D67EC"
}
```

8.11. UpgradeDBInstance

Description

You can call this operation to change the type of an AnalyticDB for PostgreSQL instance.

Note

- The instance must be in the running state when you change the type. Otherwise, the operation fails.
- Instance type upgrade takes about 30 minutes to 3 hours to complete. The times varies with the data volume of the instance.
- To ensure data consistency, the instance only provides the read-only service during the change process, and the instance will have two transient disconnections. We recommend that you arrange your business in advance to avoid service interruptions.
- After the type is changed, the database kernel of the instance is automatically upgraded to the latest version.

For more information about how to perform the corresponding operation in the console, see [Upgrade the instance configuration](#)

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UpgradeDBInstance	The operation that you want to perform. Set the value to UpgradeDBInstance.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
DBInstanceId	String	Yes	gp-xxxxxxxxxxxxxx	The ID of the instance for which you want to change the type.
DBInstanceClass	String	Yes	gpdb.group.segdx1	The instance type. For more information, see Instance types .
DBInstanceGroupCount	String	Yes	2	The number of compute groups of the AnalyticDB for PostgreSQL instance.

Response parameters

Parameter	Type	Example	Description
RequestId	String	25C11EE5-B7E8-481A-A07C-BD619971A570	The ID of the request.

Sample requests

```
https://gpdb.aliyuncs.com/?Action=UpgradeDBInstance
&DBInstanceId=gp-wz9kmr708m155j***
&DBInstanceClass=gpdb.group.segsdx1
&DBInstanceGroupCount=2
&<Common request parameters>
```

Sample responses

```
{
  "requestId": "25C11EE5-B7E8-481A-A07C-BD619971A570"
}
```

8.12. UpgradeDBVersion

Description

You can call this operation to upgrade the minor kernel version of a specified instance.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UpgradeDBVersion	The operation that you want to perform. Set the value to UpgradeDBVersion.
DBInstanceId	String	Yes	gp-xxxxxxxxxxxxxx	The ID of the instance.

Response parameters

Parameter	Type	Example	Description
RequestId	String	25C11EE5-B7E8-481A-A07C-BD619971A570	The ID of the request.
DBInstanceId	String	gp-xxxxxxxxxxxxxx	The ID of the instance.
DBInstanceName	String	gp-xxxxxxxxxxxxxx	The name of the instance.
TaskId	String	101450956	The ID of the task.

Sample requests

```
https://gpdb.aliyuncs.com/?Action=UpgradeDBVersion
&DBInstanceId=gp-wz9kmr708m155j***
&<Common request parameters>
```

Sample responses

```
{
  "requestId": "25C11EE5-B7E8-481A-A07C-BD619971A570",
  "DBInstanceId": "gp-wz9kmr708m155j***",
  "DBInstanceName": "gp-wz9kmr708m155j***",
  "TaskId": "101450956"
}
```

8.13. 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 Common parameters .
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 Performance parameters .

Name	Type	Required	Description
StartTime	String	Yes	The start time of a period during which you want to check metrics. For example, 2018-06-11T15:00Z.
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 Common response parameters .
DBInstanceId	String	The instance name.
Engine	String	The database type.
StartTime	String	The start time. The format is <code>YYYY-MM-DDTHH:mmZ</code> , 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 <code>YYYY-MM-DDTHH:mmZ</code> , such as 2018-05-30T03:29Z.
PerformanceKeys	List<PerformanceKey>	List of metrics, such as {perf1, perf2, perf3, ...}.

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&com_insert&com_insert_select&com_replace</code> .
GroupValues	List<GroupValue>	List of group values, such as {value1, value2, ...}.

GroupValue parameters

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

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-5F307DCB407E</RequestId>
<DBInstanceId>gp-xxxxxxx</DBInstanceId>
<PerformanceKeys>
```

```
<PerformanceKeys>
  <Key>MemoryUsage</Key>
  <GroupValues>
    <Name>7198315-1530522046144-1</Name>
    <Values />
  </GroupValues>
  <GroupValues>
    <Name>7198315-1530522046144-0</Name>
    <Values />
  </GroupValues>
  <GroupValues>
    <Values />
  <Name>master</Name>
</GroupValues>
<Unit>%</Unit>
<ValueFormat>mem_usage</ValueFormat>
</PerformanceKeys>
<PerformanceKeys>
  <Key>Gpdb_session</Key>
  <GroupValues>
    <Name>7198315-1530522046144-1</Name>
    <Values />
  </GroupValues>
  <GroupValues>
    <Name>7198315-1530522046144-0</Name>
    <Values />
  </GroupValues>
  <GroupValues>
    <Values />
  <Name>master</Name>
</GroupValues>
<Unit>int</Unit>
<ValueFormat>conn_count</ValueFormat>
</PerformanceKeys>
<PerformanceKeys>
  <Key>CpuUsage</Key>
  <GroupValues>
    <Name>7198315-1530522046144-1</Name>
    <Values />
  </GroupValues>
  <GroupValues>
```

```
<Name>7198315-1530522046144-0</Name>
<Values />
</GroupValues>
<GroupValues>
<Values />
<Name>master</Name>
</GroupValues>
<Unit>%</Unit>
<ValueFormat>cpu_usage</ValueFormat>
</PerformanceKeys>
<PerformanceKeys>
<Key>Gpdb_IOPS</Key>
<GroupValues>
<Name>7198315-1530522046144-1</Name>
<Values />
</GroupValues>
<GroupValues>
<Name>7198315-1530522046144-0</Name>
<Values />
</GroupValues>
<GroupValues>
<Values />
<Name>master</Name>
</GroupValues>
<Unit>int</Unit>
<ValueFormat>data_iops&write_iops&read_iops</ValueFormat>
</PerformanceKeys>
<PerformanceKeys>
<Key>Gpdb_SpaceUsage</Key>
<GroupValues>
<Name>7198315-1530522046144-1</Name>
<Values />
</GroupValues>
<GroupValues>
<Name>7198315-1530522046144-0</Name>
<Values />
</GroupValues>
<GroupValues>
<Values />
<Name>master</Name>
</GroupValues>
```

```

<Unit>Byte</Unit>
<ValueFormat>space</ValueFormat>
</PerformanceKeys>
<EndTime>2018-07-09T03:47Z</EndTime>
<StartTime>2018-07-08T03:47Z</StartTime>
<Engine>gpdb</Engine>
</DescribeDBInstancePerformanceResponse>

```

JSON format

```

{
  "RequestId": "5E85244A-AB47-46A3-A3AD-5F307DCB407E",
  "DBInstanceId": "gp-xxxxxxx",
  "PerformanceKeys": [
    {
      "Key": "MemoryUsage",
      "GroupValues": [
        {
          "Name": "7198315-1530522046144-1",
          "Values": Array[288]
        },
        {
          "Name": "7198315-1530522046144-0",
          "Values": Array[288]
        },
        {
          "Values": Array[288],
          "Name": "master"
        }
      ],
      "Unit": "%",
      "ValueFormat": "mem_usage"
    },
    {
      "Key": "Gpdb_session",
      "GroupValues": [
        {
          "Name": "7198315-1530522046144-1",
          "Values": Array[288]
        },
        {

```



```
"Name": "7198315-1530522046144-0",
"Values": Array[288]
},
{
"Values": Array[288],
"Name": "master"
}
],
"Unit": "int",
"ValueFormat": "conn_count"
},
{
"Key": "CpuUsage",
"GroupValues": [
{
"Name": "7198315-1530522046144-1",
"Values": Array[288]
},
{
"Name": "7198315-1530522046144-0",
"Values": Array[288]
}
],
"Unit": "%",
"ValueFormat": "cpu_usage"
},
{
"Key": "Gpdb_IOPS",
"GroupValues": [
{
"Name": "7198315-1530522046144-1",
"Values": Array[288]
},
{
"Name": "7198315-1530522046144-0",
"Values": Array[288]
}
],

```

```
},
{
  "Values":Array[288],
  "Name":"master"
},
],
"Unit":"int",
"ValueFormat":"data_iops&write_iops&read_iops"
},
{
  "Key":"Gpdb_SpaceUsage",
  "GroupValues":[
    {
      "Name":"7198315-1530522046144-1",
      "Values":Array[288]
    },
    {
      "Name":"7198315-1530522046144-0",
      "Values":Array[288]
    },
    {
      "Values":Array[288],
      "Name":"master"
    }
  ],
  "Unit":"Byte",
  "ValueFormat":"space"
},
],
"EndTime":"2018-07-09T03:47Z",
"StartTime":"2018-07-08T03:47Z",
"Engine":"gpdb"
}
```

9.Database management

9.1. DeleteDatabase

You can call this operation to delete a database from an AnalyticDB for PostgreSQL instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteDatabase	The operation that you want to perform. Set the value to DeleteDatabase.
DBInstanceId	String	Yes	gp-xxxxxxxxxxx	The ID of the instance.
DBName	String	No	testdb01	The name of the database.

Response parameters

Parameter	Type	Example	Description
RequestId	String	07F6177E-6DE4-408A-BB4F-0723301340F3	The ID of the request.

Examples

Sample requests

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

Sample success responses

`XML` format

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

JSON format

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

Error code

For a list of error codes, visit the [API Error Center](#).

10.Account management

10.1. 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 Common parameters .
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 Common response parameters .

Sample requests

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

Sample responses

XML format

```
<CreateAccountResponse>
<RequestId>D4D4BE8A-DD46-440A-BFCD-EE31DA81C9DD</RequestId>
</CreateAccountResponse>
```

JSON format

```
{
  "RequestId": "D4D4BE8A-DD46-440A-BFCD-EE31DA81C9DD"
}
```

10.2. 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 Common parameters .
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 parameters>	-	For more information, see Common response parameters .
Accounts	List<DBInstanceAccount>	The list of accounts.

DBInstanceAccount parameters

Name	Type	Description
DBInstanceId	String	The instance name.

Name	Type	Description
AccountName	String	The account name.
AccountStatus	String	The account status is as follows: <ul style="list-style-type: none"> • 0: indicates that the account is being created. • 1: indicates that the account is being used. • 3: indicates that the account is being deleted.
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",
        "AccountStatus": "1",
        "AccountName": "testaccount_1"
      }
    ]
  },
  "RequestId": "7565770E-7C45-462D-BA4A-8A5396F2CAD1"
}
```

10.3. 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 Common parameters .
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"> • Starts with a letter. • Contains only lowercase letters, numbers, and underscores. • Length constraints: Maximum length of 16 characters. • Reserved keywords are not allowed to be used.
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"> • Starts with a Chinese or English character. • Starting with "http://" or "https://" is not allowed. • Contains only Chinese characters, English characters, underscores (_), hyphens (-), and numbers. • Length constraints: Minimum length of 2 characters. Maximum length of 256 characters.

Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see Common response parameters .

Sample requests

```
https://gpdb.aliyuncs.com/?Action=ModifyAccountDescription
&DBInstanceId=gp-xxxxxxx
&AccountName=testAccount
&AccountDescription=testAccountdescribe
&<Common request parameters>
```

Sample responses

XML format

```
<ModifyAccountDescriptionResponse>
<RequestId>99BBBD5E-B5D8-4FC8-B8BF-FB1A0A38BBA2</RequestId>
</ModifyAccountDescriptionResponse>
```

JSON format

```
{
  "RequestId": "99BBBD5E-B5D8-4FC8-B8BF-FB1A0A38BBA2"
}
```

10.4. 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 Common parameters .
Action	String	Yes	The operation that you want to perform. Set the value to <code>ResetAccountPassword</code> .
DBInstanceId	String	Yes	The ID of the instance.

Name	Type	Required	Description
AccountName	String	Yes	The name of the account.
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 Common response parameters .

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"  
}
```

11.Security management

11.1. 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 Common parameters .
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 Common response parameters .
Items	List<DBInstanceIPArray>	The list of whitelists for an instance.

The parameters of DBInstanceIPArray

Name	Type	Description
DBInstanceIPArrayName	String	The name of the whitelist.
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.

Name	Type	Description
SecurityIPList	String	<p>You can add up to 1000 IP addresses to a whitelist. Multiple IP addresses are separated by commas. The format is as follows:</p> <ul style="list-style-type: none"> • 0.0.0.0/0 • 10.23.12.24 (IP) • 10.23.12.24/24 represents the IPv4 address 10.23.12.24. Its subnet mask is 255.255.255.0, which has 24 leading 1 bits, and its associated routing prefix. The IP address is expressed as Classless Inter-Domain Routing (CIDR) notation.

Sample requests

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

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>
</DescribeDBInstanceIPArrayListResponse>
```

JSON format

```

{
  "Items":{
    "DBInstanceIPArray":[
      {
        "groupName":"default",
        "groupTag": "",
        "securityIPList":"127.0.0.1"
      }
    ]
  },
  "RequestId":"CB7AA0BF-BE41-480E-A3DC-C97BF85A391B"
}

```

11.2. 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 Common parameters .
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"> 0.0.0.0/0 10.23.12.24 (IP) 10.23.12.24/24 represents the IPv4 address 10.23.12.24. Its subnet mask is 255.255.255.0. /24 represents the length of a routing prefix. The length ranges from 1 to 32. The IP address is expressed as a Classless Inter-Domain Routing (CIDR) notation.
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="border: 1px solid #add8e6; padding: 5px; margin-top: 10px;"> <p> Note You can create up to 50 whitelists for an instance.</p> </div>
DBInstanceIPArrayAttribute	String	No	<p>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.</p>

Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see Common response parameters .

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"
}
```

12. Log management

12.1. DescribeSQLCollectorPolicy

Description

Checks whether the SQL collection feature is enabled for an AnalyticDB for PostgreSQL instance.

Request parameters

Parameter	Type	Required	Description
<Common request parameters>	N/A	Yes	For more information, see Common parameters .
Action	String	Yes	The operation that you want to perform. Set the value to DescribeSQLCollectorPolicy.
DBInstanceId	String	Yes	The ID of the instance.

Response parameters

Parameter	Type	Description
<Common response parameters>		For more information, see Common response parameters .
SQLCollectorStatus	String	<ul style="list-style-type: none"> Enabled: SQL collection is enabled. Disabled: SQL collection is disabled.

Sample requests

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

Sample success responses

XML format

```
<DescribeSQLCollectorPolicyResponse>
<RequestId>ABB39CC3-4488-4857-905D-2E4A051D0521</RequestId>
<SQLCollectorStatus>Enable</SQLCollectorStatus>
</DescribeSQLCollectorPolicyResponse>
```

JSON format

```
{
  "RequestId": "ABB39CC3-4488-4857-905D-2E4A051D0521",
  "SQLCollectorStatus": "Enable"
}
```

12.2. DescribeSQLLogFiles

Description

Queries the SQL audit log files of an instance.

Request parameters

Parameter	Type	Required	Description
<Common request parameters>	N/A	Yes	For more information, see Common parameters .
Action	String	Yes	The operation that you want to perform. Set the value to DescribeSQLLogFiles.
DBInstanceId	String	Yes	The ID of the instance.
FileName	String	No	The name of the file.
PageSize	Integer	No	The number of entries to return on each page. Valid values: 30, 50, and 100. Default value: 30.
PageNumber	Integer	No	The number of the page to return. Valid values: any non-zero positive integer. Default value: 1.

Response parameters

Parameter	Type	Description
<Common response parameters>		For more information, see Common response parameters .
TotalRecordCount	Integer	The total number of entries.
PageNumber	Integer	The number of the returned page.
PageRecordCount	Integer	The number of entries returned on the current page.
Items	List<LogFile>	An array consisting of LogFile data.

LogFile parameters

Parameter	Type	Description
FileID	Integer	The ID of the file.
LogStatus	String	The status of the file. Valid values: <ul style="list-style-type: none"> • NoStart: The file has not been generated. • Generating: The file is being generated. • Success: The file is generated. • Failed: The file failed to be generated.
LogStartTime	String	The beginning of the time range within which data was recorded in the file.
LogEndTime	String	The end of the time range within which data was recorded in the file.
LogDownloadURL	String	The URL used to download the file. If the URL is unavailable, an empty string is returned.
LogSize	Long	The size of the file. Unit: bytes.

Sample requests

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

Sample responses

XML format

```
<DescribeSQLLogFilesResponse>
<Items></Items>
<PageNumber>1</PageNumber>
<TotalRecordCount>0</TotalRecordCount>
<RequestId>66E164C1-D7F2-4D85-849D-E2883FCFFBA5</RequestId>
<PageRecordCount>0</PageRecordCount>
</DescribeSQLLogFilesResponse>
```

JSON format

```
{
  "Items":{
    "LogFile":[

    ]
  },
  "PageNumber":1,
  "TotalRecordCount":0,
  "RequestId":"66E164C1-D7F2-4D85-849D-E2883FCFFBA5",
  "PageRecordCount":0
}
```

12.3. DescribeSQLLogRecords

Description

Queries the SQL audit logs generated for an instance over a specific time range.

Request parameters

Parameter	Type	Required	Description
<Common request parameters>	N/A	Yes	For more information, see Common parameters .

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeSQLLogRecords.
DBInstanceId	String	Yes	The ID of the instance.
Database	String	No	The database whose SQL audit logs you want to query. By default, the SQL audit logs of all databases in the instance are queried.
User	String	No	The account to which the database belongs. By default, the SQL audit logs of databases under all accounts are queried.
QueryKeywords	String	No	The keywords used for query. You can enter up to 10 keywords at a time but must separate them with spaces.
StartTime	String	Yes	The beginning of the time range to query. Specify the time in the yyyy-MM-ddTHH:mm:ssZ format.
EndTime	String	Yes	The end of the time range to query. Specify the time in the yyyy-MM-ddTHH:mm:ssZ format. The end time must be later than the start time.
PageSize	Integer	No	The number of entries to return on each page. Valid values: 30, 50, and 100. Default value: 30.

Parameter	Type	Required	Description
PageNumber	Integer	No	The number of the page to return. Valid values: any non-zero positive integer. Default value: 1.

Response parameters

Parameter	Type	Description
<Common response parameters>		For more information, see Common response parameters .
TotalRecordCount	Integer	The total number of entries.
PageNumber	Integer	The number of the returned page.
PageRecordCount	Integer	The number of SQL audit log entries returned on the current page.
Items	List<SQLRecord>	An array consisting of SQLRecord data.

SQLRecord parameters

Parameter	Type	Description
DBName	String	The name of the database.
AccountName	String	The name of the account.
HostAddress	String	The IP address of the client.
SQLText	String	The SQL statement.
TotalExecutionTimes	Long	The amount of time taken to execute the statement. Unit: microseconds.
ReturnRowCounts	Long	The number of entries returned.
ThreadID	String	The ID of the thread.
ExecuteTime	String	The time when the query was executed. The time is in the yyyy-MM-ddTHH:mm:ssZ format, 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
}
```

12.4. ModifySQLCollectorPolicy

Description

You can call this operation to enable or disable SQL collection for the instance.

Request parameters

Name	Type	Required	Description
<Common request parameters>	-	Yes	For more information, see Common parameters .
Action	String	Yes	The operation that you want to perform. Set the value to <code>ModifySQLCollectorPolicy</code> .
DBInstanceId	String	Yes	The ID of the instance.
SQLCollectorStatus	String	Yes	<ul style="list-style-type: none"> Enabled: SQL collection is enabled. Disabled: SQL collection is disabled.

Response parameters

Name	Type	Description
<Common response parameters>	-	For more information, see Common response parameters .

Sample requests

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

Sample responses

XML format

```
<ModifySQLCollectorPolicyResponse>
<RequestId>4FA1F1D1-50A6-4F60-9A78-5752F2076A53</RequestId>
</ModifySQLCollectorPolicyResponse>
```

JSON format

```
{
  "RequestId": "4FA1F1D1-50A6-4F60-9A78-5752F2076A53"
}
```

13. Network management

13.1. 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 Common parameters .
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 Common response parameters .

Sample requests

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

Sample responses

XML format

```
<AllocateInstancePublicConnectionResponse>
<RequestId>ADD6EA90-EECB-4C12-9F26-0B6DB58710EF</RequestId>
</AllocateInstancePublicConnectionResponse>
```

JSON format

```
{
  "RequestId": "ADD6EA90-EECB-4C12-9F26-0B6DB58710EF"
}
```

13.2. 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 Common parameters .
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 Common response parameters .
DBInstanceNetInfos	List<DBInstanceNetInfo>	The connection information of the instance.
InstanceNetworkType	String	<ul style="list-style-type: none"> Classic: classic networks. VPC: VPC networks.

DBInstanceNetInfo

Name	Type	Description
ConnectionString	String	The DNS connection string.
IPAddress	String	The IP address.
IPType	String	<ul style="list-style-type: none"> For a classic network, the IPType parameter can be Inner or Public. For a VPC network, the IPType parameter can be Private or Public.
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
&<Common request parameters>
```

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>
<RequestId>7565770E-7C45-462D-BA4A-8A5396F2CAD1</RequestId>
</DescribeDBInstanceNetInfoResponse>
```

JSON format

```
{
  "InstanceNetworkType": "classic",
  "DBInstanceNetInfos": {
    "DBInstanceNetInfo": [
      {
        "DBInstanceNetType": "1",
        "connectionString": "gp-xxxxxxx.gpdb.rds.aliyuncs.com",
        "ipAddress": "127.0.0.1",
        "port": "3432",
        "userVisible": 1
      }
    ]
  },
  "RequestId": "7565770E-7C45-462D-BA4A-8A5396F2CAD1"
}
```

13.3. 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 Common parameters .
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"> VPC Classic
VPCId	String	No	The ID of the VPC.

Name	Type	Required	Description
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 Common response parameters .

Sample requests

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

Sample responses

XML format

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

JSON format

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

13.4. 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 Common parameters .
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 Common response parameters .

Sample requests

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

Sample responses

XML format

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

JSON format

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


14. Appendix

14.1. Error codes

14.1.1. Client error codes

Common errors

Error code	Error message	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
Forbidden.InstanceNotFound	The specified DB instance does not exist.	404

Error code	Error message	HTTP status code
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

Operation-specific errors

Error code	Error message	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
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

Error code	Error message	HTTP status code
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
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

Error code	Error message	HTTP status code
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
FTPServiceUnavailable	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
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

Error code	Error message	HTTP status code
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
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.TempDBInstanceExists	You cannot perform this operation; a temp instance exists.	403
Forbidden.Authentication	The operation is forbidden by Aliyun Realname Authentication System.	403
IncorrectDBInstanceConnType	Current DB instance conn type does not support this operation.	404
IncorrectVpcId.Mismatch	The specified parameter "VpcId" is not valid.	400
IntranetNetTypeNotExists	Current DB instance net type does not support this operation.	404

Error code	Error message	HTTP status code
InvalidDBInstanceName.NotFound	The DBInstanceId provided does not exist in our records.	403
InvalidConnectionMode.ValueNotSupported	The specified parameter "ConnectionMode" is not valid.	400
InvalidConnectionString.DuplicateSpecified	Connection string already exists in the Aliyun RDS.	403
InvalidConnectionString.DuplicateSpecified	Connection string or port want to be modified is the same with current net type.	400
InvalidConnectionStringPrefix.Duplicated	The specified connection string already exists.	403
InvalidCurrentConnectionString.NotFound	Specified current connection string doesn't exist.	400
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.ValueNotSupported	The specified parameter "DBInstanceNetType" is not valid.	400
InvalidDBInstanceType.ValueNotSupported	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

Error code	Error message	HTTP status code
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
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
PublicConnectionExists	PublicConnection exists.	403

Error code	Error message	HTTP status code
bpclzNoNotEqualsRdsMultizNo	Specified vpc lzNo not equal rds lzNo.	400
IncorrectDBInstanceState	CurrentDB instance state does not support this operation.	403
IncorrectDBInstanceType	CurrentDB instance type does not support this operation.	400
IncorrectDBInstanceLockMode	CurrentDB instance lock mode does not support this operation.	400
ParamNotSupportedForCurrentVersion	Parameter is not supported for current version.	400
InvalidStatus.Format	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
InvalidConfigurationValue.Malformed	Specified ConfigurationValue is not valid.	403
InvalidConfigurationValueStatus.Malformed	Specified ProxyConfigurationValue (status) is not valid.	403
InvalidConfigurationValueOther.Malformed	Specified ProxyConfigurationValue (check_interval_seconds or max_failed_login_attempts or blocking_seconds) is not valid.	403
ProxyConnectionPersistExists	Specified same ProxyConnectionPersist already exists.	400
ProxyConnectionPersist.NotFound	Specified same ProxyConnectionPersist already exists.	400
ProxyConnectionPersist.NotFound	Specified ProxyConnectionPersist is not found.	400
ProxyConnectionPersistParametersInvalid	ProxyConnectionPersist parameter out of range	400
InvalidConfigValue	ProxyConnectionPersist parameter config table not exists or data error.	400

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

14.1.2. 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

14.2. 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
<code>gpdb.group.segsdx1</code>	1 Core	8 GB	80 GB SSD
<code>gpdb.group.segsdx2</code>	2 cores	16 GB	160 GB SSD

High-performance type family	CPU	Memory	Storage space
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

14.3. Performance parameters

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.
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).

14.4. Instance statuses

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.