

Alibaba Cloud

ApsaraDB for PolarDB 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 .
<code>Courier font</code>	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

provides the following API operations.

Billing

API	Description
TransformDBClusterPayType	Changes the billing method of a specified cluster.

Regions

API	Description
DescribeRegions	Queries the regions and the zones that are supported by .

Clusters

Category	API	Description
Cluster management	CreateDBCluster	Creates a cluster.
	DeleteDBCluster	Releases a specified pay-as-you-go cluster.
	DescribeDBClusters	Queries clusters or the clusters that a RAM user is authorized to access.
	DescribeDBClusterAttribute	Queries the detailed attributes of a specified cluster.
	ModifyDBClusterMaintainTime	Changes the maintenance window of a specified cluster. In most cases, the maintenance window is set to off-peak hours. Alibaba Cloud maintains your cluster in the specified maintenance window to minimize the impacts on your business.
	ModifyDBClusterDescription	Changes the name of a specified cluster to facilitate cluster maintenance.
	DescribeTasks	Queries the progress details about the tasks (such as creating a cluster) that are generated by using API operations.
Architecture deployment	ModifyDBClusterPrimaryZone	Changes the primary zone of a specified cluster.
	FailoverDBCluster	Manually switches between the primary node and a read-only node of a specified cluster. You can specify a read-only node as the new primary node.
	DescribeGlobalDatabaseNetworks	Queries the details about all global database networks (GDNs) that belong to an account.

Category	API	Description
Renewal management	DescribeAutoRenewAttribute	Queries the auto-renewal status of a specified cluster that uses the subscription billing method.
	ModifyAutoRenewAttribute	Configures auto-renewal for a specified cluster that uses the subscription billing method.
	DescribeDBClusterAvailableResources	Queries available resources for a specified cluster.

Kernel

API	Description
DescribeDBClusterVersion	Queries the details about the current kernel version of a specified cluster.
UpgradeDBClusterVersion	Queries the details about the current kernel version of a specified cluster.

Data security

Category	API	Description
Whitelist	ModifyDBClusterAccessWhitelist	Creates or modifies the whitelists (the IP whitelists and security groups) of a specified cluster.
	DescribeDBClusterAccessWhitelist	Queries the IP whitelists and the security groups of a specified cluster that can be accessed.
SSL encryption	ModifyDBClusterSSL	Enables or disables Secure Sockets Layer (SSL) encryption or updates the Certificate Authorities (CA) certificate for a specified cluster.
	DescribeDBClusterSSL	Queries the SSL settings of a specified cluster.
TDE	DescribeDBClusterTDE	Queries the details about the transparent data encryption (TDE) settings of a specified cluster.
	ModifyDBClusterTDE	Enables the TDE feature or changes the encryption method for a specified cluster.

Nodes

API	Description
CreateDBNodes	Adds a read-only node to a specified cluster.
ModifyDBNodeClass	Changes the node specifications of a specified cluster.
RestartDBNode	Restarts a node in a specified cluster.

API	Description
DeleteDBNodes	Deletes read-only nodes in a specified cluster.

Cluster parameters

API	Description
DescribeDBClusterParameters	Queries the parameters of a specified cluster.
ModifyDBClusterParameters	Modifies the parameters of a specified cluster or applies a parameter template to the cluster.
CreateParameterGroup	Creates a parameter template for a specified cluster.
DescribeParameterGroups	Queries the parameter template list of a specified cluster.
DescribeParameterGroup	Queries the details about a parameter template of a specified cluster.
DescribeParameterTemplates	Queries the default parameter list of a specified cluster.
DeleteParameterGroup	Deletes a parameter template of a specified cluster.

Endpoints

API	Description
CreateDBEndpointAddress	Creates the public endpoint of a specified cluster. The public endpoint can be the primary endpoint, the default cluster endpoint, or a custom cluster endpoint.
CreateDBClusterEndpoint	Creates a custom cluster endpoint for a specified cluster.
DescribeDBClusterEndpoints	Queries the information about the endpoints of a specified cluster.
ModifyDBClusterEndpoint	Modifies the endpoint attributes of a specified cluster, such as the read/write mode and the consistency level. You can also specify whether newly added nodes are automatically associated with the specified cluster endpoint.
ModifyDBEndpointAddress	Modifies the public endpoint of a specified cluster. The public endpoint can be the primary endpoint, the default cluster endpoint, or a custom cluster endpoint.
DeleteDBEndpointAddress	Releases the public endpoint of a specified cluster. The public endpoint can be the primary endpoint, the default cluster endpoint, or a custom cluster endpoint.
DeleteDBClusterEndpoint	Releases a custom cluster endpoint of a specified cluster.

Logs

API	Description
DescribeSlowLogRecords	Queries the details about the slow query logs of a specified cluster.
DescribeDBClusterAuditLogCollector	Queries whether SQL data collector is enabled for a specified cluster. The features of SQL data collector include audit logs and SQL Explorer.
ModifyDBClusterAuditLogCollector	Enables or disables SQL data collector for a specified cluster. The features of SQL data collector include audit logs and SQL Explorer.

Accounts

API	Description
CreateAccount	Creates an account for a specified database.
DescribeAccounts	Queries the information about a database account for a specified cluster.
CheckAccountName	Checks whether a specified account name is valid or whether an account that has the same name as the specified account already exists in the current cluster.
ModifyAccountDescription	Modifies the remarks of a specified database account.
ModifyAccountPassword	Changes the password of a specified database account.
GrantAccountPrivilege	Grants a standard account the permissions to access one or more databases in a specified cluster.
RevokeAccountPrivilege	Revokes the database access permissions that are granted to a specified standard account.
ResetAccount	Resets a specified privileged database account.
DeleteAccount	Deletes a specified database account.

Databases

API	Description
CreateDatabase	Creates a database in a specified cluster.
DescribeDatabases	Queries the databases in a specified cluster.
ModifyDBDescription	Modifies the description or remarks of a specified database.
DeleteDatabase	Deletes a database in a specified cluster.

API	Description
DescribeCharacterSetName	Queries the character sets that are supported by a specified database.
CheckDBName	Checks whether a specified database name is valid or whether a database that has the same name as the specified database already exists in the current cluster.

Backups

Category	API	Description
Backup management	CreateBackup	Manually creates a full snapshot for a specified cluster.
	DescribeBackups	Queries the backup information about a specified cluster.
	DescribeBackupTasks	Queries the backup tasks of a specified cluster.
	DescribeBackupLogs	Queries the backup logs and the URLs to download backup logs.
	DescribeDetachedBackups	Queries the information about the backup set of a specified cluster that is already released.
	DescribeDBClustersWithBackups	Queries the details about the clusters that contain backup sets and are deployed in a specified region.
	DeleteBackup	Deletes the backups of a specified cluster.
Backup policy	DescribeBackupPolicy	Queries the automatic backup policy.
	DescribeLogBackupPolicy	Queries the retention policy of log backups in a specified cluster.
	ModifyBackupPolicy	Modifies the automatic backup policy.
	ModifyLogBackupPolicy	Modifies the retention policy of log backups in a specified cluster.

Restoration

API	Description
DescribeMetaList	Queries the metadata of databases and tables that can be restored.
RestoreTable	Restores a specified database or table.

Data migration from ApsaraDB RDS

API	Description
DescribeDBClusterMigration	Queries the migration status of a specified cluster.
ModifyDBClusterMigration	Migrates data from an ApsaraDB RDS for MySQL instance to , or rolls back data migration.
CloseDBClusterMigration	Cancels or completes data migration.

Tags

API	Description
TagResources	Adds tags to a specified cluster.
UntagResources	Removes tags from a specified cluster.
ListTagResources	Queries the tags that are added to one or more clusters, or queries the clusters to which one or more tags are added.

Pending events

API	Description
DescribePendingMaintenanceAction	Queries the details about pending events.
DescribePendingMaintenanceActions	Queries the numbers of pending events for different types of tasks.
ModifyPendingMaintenanceAction	Changes the task switch time of pending events.

Scheduled tasks

API	Description
DescribeScheduleTasks	Queries the details about all or specified scheduled tasks that belong to the current account.
CancelScheduleTasks	Cancels a specified scheduled task.

Masking rules

API	Description
DescribeMaskingRules	Queries the data masking rules that apply to a specified cluster or the details about a specified masking rule.
ModifyMaskingRules	Modifies or adds data masking rules.
DeleteMaskingRules	Deletes a specified data masking rule.

Monitoring

API	Description
DescribeDBNodePerformance	Queries the performance data of a specified cluster node.
DescribeDBClusterPerformance	Queries the performance data of a specified cluster.
DescribeDBClusterMonitor	Queries the frequency at which the monitoring data of a specified cluster is collected.
ModifyDBClusterMonitor	Changes the frequency at which the monitoring data of a specified cluster is collected.

2. Use RAM for resource authorization

This topic describes how to use Resource Access Management (RAM) to authorize resources.

Description

All the clusters that are created by using an Alibaba Cloud account are the resources that are owned by the account. By default, an Alibaba Cloud account has full access permissions on the resources in the account.

You can use RAM to grant RAM users the permissions to access and manage the resources that are owned by your Alibaba Cloud account. For more information, see [Grant permissions to a RAM user](#).

The following table lists the descriptions of resources when you use RAM to grant permissions.

Request parameters

Resource type	Resource description in an authorization policy
dbcluster	acs:polardb:\$regionid:\$accountid:dbcluster/ acs:polardb:*:*:dbcluster/

The following table describes the parameters.

Parameter	Description
\$regionid	The ID of the region where the resource is available. You can specify this parameter as an asterisk (*).
\$accountid	The ID of your Alibaba Cloud account. You can specify this parameter as an asterisk (*).

Examples

```
{
  "Version": "1",
  "Statement": [
    {
      "Action": [
        "polardb:Describe*"
      ],
      "Effect": "Allow",
      "Resource": [
        "acs:polardb:cn-hangzhou:12345678901234:dbcluster/*"
      ]
    },
    {
      "Action": "polardb:Describe*",
      "Effect": "Allow",
      "Resource": [
        "*"
      ]
    }
  ]
}
```

3. RAM role linked to Apsara PolarDB

AliyunServiceRoleForPolarDB is the RAM role that is linked to the Apsara PolarDB service. This topic describes the application scenarios of the RAM role, and provides the details about how to delete the RAM role.

Background information

Apsara PolarDB may need to access other cloud services to implement functions. To meet this need, Alibaba Cloud provides the AliyunServiceRoleForPolarDB RAM role that allows Apsara PolarDB to access other cloud services.

Scenarios

If you want to bind a private domain name to a private IP address of Apsara PolarDB, Apsara PolarDB must access the resources of Alibaba Cloud DNS PrivateZone. In this case, Apsara PolarDB can assume the AliyunServiceRoleForPolarDB role to obtain the required access permissions.

AliyunServiceRoleForPolarDB

The name of the RAM role is AliyunServiceRoleForPolarDB.

The permission policy that is attached to the RAM role is AliyunServiceRolePolicyForPolarDB.

The permissions of the RAM role are described as follows:

```
{
  "Action": [
    "pvtz:DescribeUserServiceStatus",
    "pvtz:DescribeZones",
    "pvtz:DescribeZoneInfo",
    "pvtz:DescribeZoneRecords",
    "pvtz:CheckZoneName",
    "pvtz:AddZone",
    "pvtz:BindZoneVpc",
    "pvtz>DeleteZone",
    "pvtz:AddZoneRecord",
    "pvtz:UpdateZoneRecord",
    "pvtz>DeleteZoneRecord"
  ],
  "Resource": "*",
  "Effect": "Allow"
}
```

Delete the AliyunServiceRoleForPolarDB RAM role

Before you delete the AliyunServiceRoleForPolarDB RAM role, you must release the Apsara PolarDB cluster that is dependent on this RAM role.

- For more information about how to release an Apsara PolarDB cluster, see [Release a cluster](#).

4.Call methods

4.1. Common parameters

Common parameters, which consist of common request parameters and common response parameters, are required by all API operations.

Common request parameters

The following table describes common request parameters required by all API requests.

Parameter	Type	Required	Description
Format	String	No	The format of the response. Valid values: JSON and XML. Default value: JSON.
Version	String	Yes	The API version, in YYYY-MM-DD format. The current version is 2017-08-01.
AccessKeyId	String	Yes	The AccessKey ID provided to you by Alibaba Cloud.
Signature	String	Yes	The calculated signature string. For more information about how to calculate a signature, see Signatures .
SignatureMethod	String	Yes	The signature algorithm. Currently, only HMAC-SHA1 is supported.
Timestamp	String	Yes	The timestamp of the request. Specify the time in the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time must be in UTC. For example, a value of <code>2021-03-17T12:00:00Z</code> indicates 20:00:00 on March 17, 2021, UTC+8.

Parameter	Type	Required	Description
SignatureVersion	String	Yes	The version of the signature algorithm. The current version is 1.0.
SignatureNonce	String	Yes	The unique random number that is used to prevent replay attacks. You must use different random numbers for different requests.

Common response parameters

The system returns a unique ID (RequestId) for each API request, regardless of the request result.

Sample request

```
https://polaradb.aliyuncs.com/
?Format=xml
&Version=2017-08-01
&Signature=Pc5WB8gokVn0xfeu%2FZV%2BiNMldgI%3D
&SignatureMethod=HMAC-SHA1
&SignatureNonce=15215528852396
&SignatureVersion=1.0
&AccessKeyId=key-test
&OwnerId=12345678
&Timestamp=2021-03-17T12:00:00Z
```

Sample response

After you send an API request, the system returns a response in a uniform format. A returned HTTP status code 2xx indicates that the request is successful. A returned HTTP status code 4xx or 5xx indicates that the request fails. The system returns a success response in XML or JSON format. You can specify the format of the response in request parameters. The default format is XML. For the sake of readability, lines in all sample responses are wrapped and indented in the API reference. Note that lines are not formatted in actual responses.

- Sample success response
 - XML format

```
<? xml version="1.0" encoding="utf-8"? >
<!--Result root node-->
<Operation+Response>
  <!--Tag of the response to the request-->
  <RequestId>4C467B38-3910-447D-87BC-AC049166F216</RequestId>
  <!--Result data-->
</Operation+Response>
```

- JSON format

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

- Sample error response

If an error occurs during an API operation, the system does not return result data. You can identify the cause of the error according to [Client error codes](#).

If you send an HTTP request, the system returns an HTTP status code 4xx or 5xx to indicate an error. The returned response body contains the specific error code and error message. It also contains the globally unique request ID (RequestId) and the requested host ID (HostId). If you cannot identify the cause of the error, you can contact the Alibaba Cloud customer service staff and provide the returned HostId and RequestId to help the staff resolve the error.

- XML format

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

- JSON format

```
{
  "RequestId": "7463B73D-35CC-4D19-A010-6B8D65D242EF",
  "HostId": "polardb.aliyuncs.com",
  "Code": "UnsupportedOperation",
  "Message": "The specified action is not supported."
}
```

4.2. Request structures

Endpoints

The following table describes the endpoints for the API in different regions.

Region	Endpoint
- China (Hangzhou) - China (Shanghai) - China (Qingdao) - China (Beijing) - China (Shenzhen) - China (Hong Kong) - Singapore (Singapore) - US (Silicon Valley) - US (Virginia)	polardb.aliyuncs.com
China (Hohhot)	polardb.cn-huhehaote.aliyuncs.com
China (Zhangjiakou)	polardb.cn-zhangjiakou.aliyuncs.com
China (Chengdu)	polardb.cn-chengdu.aliyuncs.com
Germany (Frankfurt)	polardb.eu-central-1.aliyuncs.com
Malaysia (Kuala Lumpur)	polardb.ap-southeast-3.aliyuncs.com
India (Mumbai)	polardb.ap-south-1.aliyuncs.com
Indonesia (Jakarta)	polardb.ap-southeast-5.aliyuncs.com
Japan (Tokyo)	polardb.ap-northeast-1.aliyuncs.com
UK (London)	polardb.eu-west-1.aliyuncs.com
Australia (Sydney)	polardb.ap-southeast-2.aliyuncs.com

Communication protocol

You can send requests over HTTP or HTTPS. We recommend that you send requests over HTTPS to enhance security.

Request method

You can use the HTTP GET method to send requests. In this case, you must specify request parameters in the URL of the request.

Request parameters

In each request, you must set the Action parameter to specify the operation that you want to perform (such as CreateDatabase). You must also specify the common request parameters and the operation-specific parameters.

Character encoding

All requests and responses are encoded in UTF-8.

4.3. Signatures

authenticates each access request. Therefore, a request must contain signature information regardless of whether it is sent over HTTP or HTTPS. implements symmetric encryption with an AccessKey pair that consists of an AccessKey ID and AccessKey secret to verify the identity of the request sender. The AccessKey ID and AccessKey secret are officially issued by Alibaba Cloud to users. You can request and manage the AccessKey pair on the Alibaba Cloud official website. The AccessKey ID indicates the identity of a user. The AccessKey secret is the key used to encrypt the signature string and verify the signature string on the server. The AccessKey secret must be strictly kept confidential.

Perform the following steps to sign a request:

1. Use request parameters to construct a canonicalized query string.
 - i. Sort all request parameters in alphabetical order of parameter names. These parameters include the common request parameters described in the "Common parameters" topic and the operation-specific parameters. However, the Signature parameter is not included.

 **Notice** If you use the GET method to send a request, the request parameters are included as a part of the request URL. The request parameters follow the question mark (?) in the request URL and are concatenated with ampersands (&).

- ii. Encode the name and value of each request parameter. The parameter names and values must be URL-encoded in UTF-8 based on the following encoding rules:
 - a. Do not encode uppercase letters (A-Z), lowercase letters (a-z), digits (0-9), and characters including the hyphen (-), underscore (_), period (.), and tilde (~).
 - b. Encode other characters into the %XY format. XY is the hexadecimal value of the ASCII code corresponding to a character. For example, a double quotation mark (") is encoded as %22.
 - c. Extended UTF-8 characters are encoded in the %XY%ZA... format.
 - d. Encode a space as %20 instead of a plus sign (+).

 **Notice** Most libraries that support URL encoding, such as java.net.URLEncoder, comply with the Multipurpose Internet Mail Extensions (MIME) encoding rules of "application/x-www-form-urlencoded". If you use this encoding method, replace each plus sign (+) with %20, each asterisk (*) with %2A, and %7E with a tilde (~).

- iii. Use an equal sign (=) to connect the name and value of each URL-encoded request parameter as a key-value pair.
 - iv. Sort the key-value pairs connected by equal signs (=) in alphabetical order and separate them with ampersands (&) to obtain the canonicalized query string.
2. Use the canonicalized query string to construct the string for signature based on the following rules:

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

Parameters:

- HTTPMethod: the HTTP method used to submit the request, such as GET.
 - percentEncode("/"): the encoded value of a forward slash (/) based on the URL encoding rules described in 1.b. The encoded value is %2F.
 - percentEncode(CanonicalizedQueryString): the string encoded by using the canonicalized query string constructed in Step 1. The encoding follows the URL encoding rules described in Step 1.ii.
- 3. Use the preceding string to calculate the hash-based message authentication code (HMAC) value of the signature as defined in RFC 2104.

 **Notice** The key that is used to calculate the signature is the AccessKey secret appended with an ampersand (&) (ASCII: 38). Secure Hash Algorithm 1 (SHA1) is used in the calculation.

- 4. Use Base64 to encode the HMAC value into a string. This encoded string is the signature.
- 5. Add the signature string to the request as the value of the Signature parameter.

 Note

When the signature string is submitted to the server as the final value of the request parameter, the string must be URL-encoded as other parameters based on rules defined in RFC 3986.

For example, the request URL without a signature for the DescribeDBClusters operation is:

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

The constructed StringToSign string is:

```
GET%2F&AccessKeyId%3Dtestid&Action%3DDescribeDBClusters&Format%3DXML&RegionId%3Dregion1&SignatureMethod%3DHMAC-SHA1&SignatureNonce%3DNwDaxvLU6tFE0DVb&SignatureVersion%3D1.0&TimeStamp%3D2013-06-01T10%253A33%253A56Z&Version%3D2014-08-15
```

Assume that the AccessKey ID is testid and the AccessKey secret is testsecret. Then, the Key used to calculate the HMAC value of the signature is testsecret&. The calculated signature string is `BIPOMlu8LXBeZtLQkJTw6iFvw1E=`.

The following example shows the request URL with the Signature parameter:

```
http://polardb.aliyuncs.com/?Timestamp=2013-06-01T10%3A33%3A56Z&Format=XML&AccessKeyId=testid&Action=DescribeDBClusters&SignatureMethod=HMAC-SHA1&RegionId=region1&SignatureNonce=NwDaxvLU6tFE0DVb&SignatureVersion=1.0&Version=2014-08-15&Signature=BIPOMlu8LXBeZtLQkJTw6iFvw1E%3D
```

5. Billing

5.1. TempModifyDBNode

Temporarily upgrades the configuration of a PolarDB cluster or adds one or more nodes to the cluster.

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
ClientToken	String	No	6000170000591aed949d0f5***** *****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value. Make sure that the value is unique among different requests. The value of this parameter is case-sensitive. The value can contain only ASCII characters and can be up to 64 characters in length.
Action	String	Yes	TempModifyDBNode	The operation that you want to perform. Set the value to TempModifyDBNode .
DBClusterId	String	Yes	pc-xxxxxxxxxx	The ID of the cluster.
OperationType	String	Yes	Modify	The type of the operation. Valid values: Add: Add one or more nodes to the cluster. Modify: Temporarily upgrade the configuration of the cluster.
ModifyType	String	Yes	TempUpgrade	The type of configuration change. Set the value to TempUpgrade .

Parameter	Type	Required	Example	Description
RestoreTime	String	Yes	2021-09-23 18:16:00	The rollback time of the configuration for the temporary upgrade. Specify the time in the YYYY-MM-DD hh:mm:ss format. Note The rollback time cannot be 1 hour earlier than the current time and cannot be later than one day before the time when the cluster expires.
DBNode.N.TargetClass	String	No	polar.mysql.x4.medium	The instance type of the added node. The instance type of the added node must be the same as the instance type of original nodes. Note You can call the DescribeDBClusters operation to view the instance type of original nodes.
DBNode.N.ZoneId	String	No	cn-hangzhou-i	The ID of the zone where the added node is deployed. The instance type of the added node must be the same as the instance type of original nodes.

Response parameters

Parameter	Type	Example	Description
DBNodeIds	Array of String	pi-*****	The node information. Note If OperationType is set to Add, the value of this parameter is returned. If OperationType is set to Modify, no value is returned.
RequestId	String	69A85BAF-1089-4CDF-A82F-0A140F*****	The ID of the request.
DBClusterId	String	pc-xxxxxxxxxxxxxxxxxx	The ID of the cluster.

Parameter	Type	Example	Description
OrderId	String	2035638*****	The ID of the order.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?ClientToken=6000170000591aed949d0f5*****
&Action=TempModifyDBNode
&DBClusterId=pc-xxxxxxxxxx
&OperationType=Modify
&ModifyType=TempUpgrade
&DBNode=[{"TargetClass":"polar.mysql.x4.medium","ZoneId":"cn-hangzhou-i"}]
&RestoreTime=2021-09-23 18:16:00
&Common request parameters
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<TempModifyDBNodeResponse>
  <DBNodeIds>pi-*****</DBNodeIds>
  <RequestId>69A85BAF-1089-4CDF-A82F-0A140F*****</RequestId>
  <DBClusterId>pc-*****</DBClusterId>
  <OrderId>2035638*****</OrderId>
</TempModifyDBNodeResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "DBNodeIds" : [ "pi-*****" ],
  "RequestId" : "69A85BAF-1089-4CDF-A82F-0A140F*****",
  "DBClusterId" : "pc-*****",
  "OrderId" : "2035638*****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDBCluster.NotFound	The specified DBClusterId is not found.	The error message returned because the specified cluster instance ID does not exist.

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

5.2. TransformDBClusterPayType

Changes the billing method of a specified cluster.

Note

- PolarDB clusters support the subscription and pay-as-you-go billing methods. You can change the billing method from subscription to pay-as-you-go or from pay-as-you-go to subscription based on your business requirements. For more information, see [Change the billing method from subscription to pay-as-you-go](#) and [Change the billing method from pay-as-you-go to subscription](#).
- You cannot change the billing method from pay-as-you-go to subscription if your account balance is insufficient.
- If you change the billing method from subscription to pay-as-you-go, the system automatically refunds the balance of the prepaid subscription fees.

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	TransformDBClusterPayType	The operation that you want to perform. Set the value to TransformDBClusterPayType .
DBClusterId	String	Yes	pc-bp10gr51qasnl*** *	The ID of the cluster.
PayType	String	Yes	Prepaid	The billing method of the cluster. Valid values: • Postpaid: pay-as-you-go • Prepaid: subscription
RegionId	String	Yes	cn-hangzhou	The region ID of the cluster.

Parameter	Type	Required	Example	Description
UsedTime	String	No	1	The subscription period of the new instance. This parameter takes effect only when you select the subscription billing method for the new instance. Valid values: - If Period is set to Year, UsedTime can be set to 1, 2, or 3. - If Period is set to Month, UsedTime can be set to 1, 2, 3, 4, 5, 6, 7, 8, or 9.  Note This parameter is required if you set PayType to Prepaid.
Period	String	No	Month	The renewal cycle of the read-only instance. Valid values: Year: yearly subscription Month: monthly subscription  Note This parameter is required if you set PayType to Prepaid.
ResourceGroupId	String	No	rg-acfm3f4un32****	The ID of the resource group.
ClientToken	String	No	6000170000591aed949d0f5*****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value. Make sure that the value is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
-----------	------	---------	-------------

Parameter	Type	Example	Description
RequestId	String	5E71541A-6007-4DCC-A38A-F872C31FEB45	The ID of the request.
ChargeType	String	Prepaid	The billing method of the cluster. Valid values: Postpaid: pay-as-you-go Prepaid: subscription
DBClusterId	String	pc-bp10gr51qasnl****	The ID of the cluster.
ExpiredTime	String	2020-04-20T10:00:00Z	The time when the instance expires.  Note This parameter is returned if PayType is set to Prepaid.
OrderId	String	20515760028****	The ID of the order.

Examples

Sample requests

```
http(s)://polaradb.aliyuncs.com/?Action=TransformDBClusterPayType
&DBClusterId=pc-bp10gr51qasnl****
&PayType=Prepaid
&RegionId=cn-hangzhou
&UsedTime=1
&Period=Month
&ResourceGroupId=rg-acfm3f4un32****
&ClientToken=6000170000591aed949d0f5*****
&Common request parameters
```

Sample responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<TransformDBClusterPayTypeResponse>
  <RequestId>5E71541A-6007-4DCC-A38A-F872C31FEB45</RequestId>
  <ChargeType>Prepaid</ChargeType>
  <DBClusterId>pc-bp10gr51qasnl****</DBClusterId>
  <ExpiredTime>2020-04-20T10:00:00Z</ExpiredTime>
  <OrderId>205157600280623</OrderId>
</TransformDBClusterPayTypeResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "5E71541A-6007-4DCC-A38A-F872C31FEB45",
  "ChargeType" : "Prepaid",
  "DBClusterId" : "pc-bp10gr5lqasnl****",
  "ExpiredTime" : "2020-04-20T10:00:00Z",
  "OrderId" : "205157600280623"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidPaymentMethod.Incomplete	No payment method is specified for your account. We recommend that you add a payment method.	The error message returned because no valid payment method is provided within the current Alibaba Cloud account. Add a valid payment method and try again.
403	OperationDenied.LockMode	The operation is not permitted when the instance is locked.	The error message returned because the operation is not supported while the cluster is in the locked state.
404	InvalidDBCluster.NotFound	The specified DBClusterId is not found.	The error message returned because the specified cluster instance ID does not exist.

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

6.Storage plans

6.1. CreateStoragePlan

Purchases a storage plan.

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
ClientToken	String	No	6000170000591aed949d0f5***** *****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value. Make sure that the value is unique among different requests. The value of this parameter is case-sensitive. The value can contain only ASCII characters and can be up to 64 characters in length.
Action	String	No	CreateStoragePlan	The operation that you want to perform. Set the value to CreateStoragePlan .
Period	String	Yes	Month	The unit of the subscription duration for the storage plan. Valid values: • Month: The subscription duration is measured in months. • Year: The subscription duration is measured in years.
UsedTime	String	Yes	3	The subscription duration of the storage plan. • If Period is set to Month, the value ranges from 1 to 9. • If Period is set to Year, the value can be 1, 2, 3, or 5.

Parameter	Type	Required	Example	Description
StorageClass	String	Yes	500	The capacity of the storage plan. Unit: GB. Valid values: 50, 100, 200, 300, 500, 1000, 2000, 3000, 5000, 10000, 15000, 20000, 25000, 30000, 50000, 100000, and 200000
StorageType	String	Yes	Mainland	The type of the storage plan. Valid values: • Mainland: The storage plan is used in mainland China. • Overseas: The storage plan is used in Hong Kong (China) and outside China.

Response parameters

Parameter	Type	Example	Description
RequestId	String	69A85BAF-1089-4CDF-A82F-0A140F*****	The ID of the request.
DBInstanceId	String	POLARDB-cn-*****	The ID of the instance.
OrderId	String	2035638*****	The ID of the order.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?ClientToken=6000170000591aed949d0f5*****
&Action=CreateStoragePlan
&Period=Month
&UsedTime=3
&StorageClass=500
&StorageType=Mainland
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateStoragePlanResponse>
  <RequestId>69A85BAF-1089-4CDF-A82F-0A140F*****</RequestId>
  <DBInstanceId>POLARDB-cn-*****</DBInstanceId>
  <OrderId>2035638*****</OrderId>
</CreateStoragePlanResponse>
```

JSON **format**

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "69A85BAF-1089-4CDF-A82F-0A140F*****",
  "DBInstanceId" : "POLARDB-cn-*****",
  "OrderId" : "2035638*****"
}
```

Error codes

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

7.Regions

7.1. DescribeRegions

Queries the available regions and zones of PolarDB.

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	No	DescribeRegions	The operation that you want to perform. Set the value to DescribeRegions .

Response parameters

Parameter	Type	Example	Description
Regions	Array of Region		The list of regions.
Region			
RegionId	String	cn-hangzhou	The ID of the region.
Zones	Array of Zone		The list of zones.
Zone			
VpcEnabled	Boolean	true	Indicates whether virtual private clouds (VPCs) are supported.
ZoneId	String	cn-hangzhou-g	The ID of the zone.
RequestId	String	3F9E6A3B-C13E-4064-A010-18582A*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DescribeRegions
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeRegionsResponse>
  <RequestId>3F9E6A3B-C13E-4064-A010-18582A*****</RequestId>
  <Regions>
    <Region>
      <RegionId>cn-hangzhou</RegionId>
      <Zones>
        <Zone>
          <VpcEnabled>true</VpcEnabled>
          <ZoneId>cn-hangzhou-h</ZoneId>
        </Zone>
        <Zone>
          <VpcEnabled>true</VpcEnabled>
          <ZoneId>cn-hangzhou-i</ZoneId>
        </Zone>
        <Zone>
          <VpcEnabled>true</VpcEnabled>
          <ZoneId>cn-hangzhou-g</ZoneId>
        </Zone>
      </Zones>
    </Region>
    <Region>
      <RegionId>cn-shanghai</RegionId>
      <Zones>
        <Zone>
          <VpcEnabled>true</VpcEnabled>
          <ZoneId>cn-shanghai-e</ZoneId>
        </Zone>
        <Zone>
          <VpcEnabled>true</VpcEnabled>
          <ZoneId>cn-shanghai-f</ZoneId>
        </Zone>
        <Zone>
          <VpcEnabled>true</VpcEnabled>
          <ZoneId>cn-shanghai-j</ZoneId>
        </Zone>
      </Zones>
    </Region>
    <Region>
      <RegionId>cn-qingdao</RegionId>
      <Zones>
        <Zone>
          <VpcEnabled>true</VpcEnabled>
          <ZoneId>cn-qingdao-b</ZoneId>
        </Zone>
        <Zone>
          <VpcEnabled>true</VpcEnabled>
          <ZoneId>cn-qingdao-c</ZoneId>
```

```
        </Zone>
      </Zones>
    </Region>
    <Region>
      <RegionId>cn-beijing</RegionId>
      <Zones>
        <Zone>
          <VpcEnabled>true</VpcEnabled>
          <ZoneId>cn-beijing-h</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>
        <Zone>
          <VpcEnabled>true</VpcEnabled>
          <ZoneId>cn-zhangjiakou-a</ZoneId>
        </Zone>
      </Zones>
    </Region>
    <Region>
      <RegionId>cn-huhehaote</RegionId>
      <Zones>
        <Zone>
          <VpcEnabled>true</VpcEnabled>
          <ZoneId>cn-huhehaote-a</ZoneId>
        </Zone>
      </Zones>
    </Region>
    <Region>
      <RegionId>cn-shenzhen</RegionId>
      <Zones>
        <Zone>
          <VpcEnabled>true</VpcEnabled>
          <ZoneId>cn-shenzhen-d</ZoneId>
        </Zone>
        <Zone>
          <VpcEnabled>true</VpcEnabled>
          <ZoneId>cn-shenzhen-e</ZoneId>
        </Zone>
      </Zones>
    </Region>
    <Region>
      <RegionId>cn-chengdu</RegionId>
      <Zones>
```



```

        <Zone>
            <VpcEnabled>true</VpcEnabled>
            <ZoneId>cn-chengdu-b</ZoneId>
        </Zone>
    </Zones>
</Region>
<Region>
    <RegionId>cn-hongkong</RegionId>
    <Zones>
        <Zone>
            <VpcEnabled>true</VpcEnabled>
            <ZoneId>cn-hongkong-b</ZoneId>
        </Zone>
        <Zone>
            <VpcEnabled>true</VpcEnabled>
            <ZoneId>cn-hongkong-c</ZoneId>
        </Zone>
    </Zones>
</Region>
<Region>
    <RegionId>ap-southeast-1</RegionId>
    <Zones>
        <Zone>
            <VpcEnabled>true</VpcEnabled>
            <ZoneId>ap-southeast-1c</ZoneId>
        </Zone>
        <Zone>
            <VpcEnabled>true</VpcEnabled>
            <ZoneId>ap-southeast-1a</ZoneId>
        </Zone>
    </Zones>
</Region>
<Region>
    <RegionId>ap-southeast-2</RegionId>
    <Zones>
        <Zone>
            <VpcEnabled>true</VpcEnabled>
            <ZoneId>ap-southeast-2b</ZoneId>
        </Zone>
    </Zones>
</Region>
<Region>
    <RegionId>ap-southeast-3</RegionId>
    <Zones>
        <Zone>
            <VpcEnabled>true</VpcEnabled>
            <ZoneId>ap-southeast-3b</ZoneId>
        </Zone>
        <Zone>
            <VpcEnabled>true</VpcEnabled>
            <ZoneId>ap-southeast-3a</ZoneId>
        </Zone>
    </Zones>
</Region>

```

```
<Region>
  <RegionId>ap-southeast-5</RegionId>
  <Zones>
    <Zone>
      <VpcEnabled>true</VpcEnabled>
      <ZoneId>ap-southeast-5b</ZoneId>
    </Zone>
    <Zone>
      <VpcEnabled>true</VpcEnabled>
      <ZoneId>ap-southeast-5a</ZoneId>
    </Zone>
  </Zones>
</Region>
<Region>
  <RegionId>ap-northeast-1</RegionId>
  <Zones>
    <Zone>
      <VpcEnabled>true</VpcEnabled>
      <ZoneId>ap-northeast-1b</ZoneId>
    </Zone>
    <Zone>
      <VpcEnabled>true</VpcEnabled>
      <ZoneId>ap-northeast-1a</ZoneId>
    </Zone>
  </Zones>
</Region>
<Region>
  <RegionId>ap-south-1</RegionId>
  <Zones>
    <Zone>
      <VpcEnabled>true</VpcEnabled>
      <ZoneId>ap-south-1b</ZoneId>
    </Zone>
    <Zone>
      <VpcEnabled>true</VpcEnabled>
      <ZoneId>ap-south-1a</ZoneId>
    </Zone>
  </Zones>
</Region>
<Region>
  <RegionId>eu-central-1</RegionId>
  <Zones>
    <Zone>
      <VpcEnabled>true</VpcEnabled>
      <ZoneId>eu-central-1b</ZoneId>
    </Zone>
  </Zones>
</Region>
<Region>
  <RegionId>eu-west-1</RegionId>
  <Zones>
    <Zone>
      <VpcEnabled>true</VpcEnabled>
      <ZoneId>eu-west-1a</ZoneId>
    </Zone>
  </Zones>
</Region>
```

```

        </Zone>
        <Zone>
            <VpcEnabled>true</VpcEnabled>
            <ZoneId>eu-west-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>us-east-1</RegionId>
    <Zones>
        <Zone>
            <VpcEnabled>true</VpcEnabled>
            <ZoneId>us-east-1b</ZoneId>
        </Zone>
    </Zones>
</Region>
</Regions>
</DescribeRegionsResponse>

```

JSON **format**

```

{
  "RequestId": "3F9E6A3B-C13E-4064-A010-18582A*****",
  "Regions": {
    "Region": [
      {
        "RegionId": "cn-hangzhou",
        "Zones": {
          "Zone": [
            {
              "VpcEnabled": true,
              "ZoneId": "cn-hangzhou-h"
            },
            {
              "VpcEnabled": true,
              "ZoneId": "cn-hangzhou-i"
            },
            {
              "VpcEnabled": true,
              "ZoneId": "cn-hangzhou-g"
            }
          ]
        }
      }
    ]
  },
  {

```

```
"RegionId": "cn-shanghai",
"Zones": {
  "Zone": [
    {
      "VpcEnabled": true,
      "ZoneId": "cn-shanghai-e"
    },
    {
      "VpcEnabled": true,
      "ZoneId": "cn-shanghai-f"
    },
    {
      "VpcEnabled": true,
      "ZoneId": "cn-shanghai-j"
    }
  ]
},
{
  "RegionId": "cn-qingdao",
  "Zones": {
    "Zone": [
      {
        "VpcEnabled": true,
        "ZoneId": "cn-qingdao-b"
      },
      {
        "VpcEnabled": true,
        "ZoneId": "cn-qingdao-c"
      }
    ]
  },
{
  "RegionId": "cn-beijing",
  "Zones": {
    "Zone": [
      {
        "VpcEnabled": true,
        "ZoneId": "cn-beijing-h"
      },
      {
        "VpcEnabled": true,
        "ZoneId": "cn-beijing-g"
      }
    ]
  },
{
  "RegionId": "cn-zhangjiakou",
  "Zones": {
    "Zone": [
      {
        "VpcEnabled": true,
```

```

        "ZoneId": "cn-zhangjiakou-b"
    },
    {
        "VpcEnabled": true,
        "ZoneId": "cn-zhangjiakou-a"
    }
]
},
{
    "RegionId": "cn-huhehaote",
    "Zones": {
        "Zone": [
            {
                "VpcEnabled": true,
                "ZoneId": "cn-huhehaote-a"
            }
        ]
    }
},
{
    "RegionId": "cn-shenzhen",
    "Zones": {
        "Zone": [
            {
                "VpcEnabled": true,
                "ZoneId": "cn-shenzhen-d"
            },
            {
                "VpcEnabled": true,
                "ZoneId": "cn-shenzhen-e"
            }
        ]
    }
},
{
    "RegionId": "cn-chengdu",
    "Zones": {
        "Zone": [
            {
                "VpcEnabled": true,
                "ZoneId": "cn-chengdu-b"
            }
        ]
    }
},
{
    "RegionId": "cn-hongkong",
    "Zones": {
        "Zone": [
            {
                "VpcEnabled": true,
                "ZoneId": "cn-hongkong-b"
            },

```

```
        {
            "VpcEnabled": true,
            "ZoneId": "cn-hongkong-c"
        }
    ]
}
},
{
    "RegionId": "ap-southeast-1",
    "Zones": {
        "Zone": [
            {
                "VpcEnabled": true,
                "ZoneId": "ap-southeast-1c"
            },
            {
                "VpcEnabled": true,
                "ZoneId": "ap-southeast-1a"
            }
        ]
    }
},
{
    "RegionId": "ap-southeast-2",
    "Zones": {
        "Zone": [
            {
                "VpcEnabled": true,
                "ZoneId": "ap-southeast-2b"
            }
        ]
    }
},
{
    "RegionId": "ap-southeast-3",
    "Zones": {
        "Zone": [
            {
                "VpcEnabled": true,
                "ZoneId": "ap-southeast-3b"
            },
            {
                "VpcEnabled": true,
                "ZoneId": "ap-southeast-3a"
            }
        ]
    }
},
{
    "RegionId": "ap-southeast-5",
    "Zones": {
        "Zone": [
            {
                "VpcEnabled": true,
                "ZoneId": "ap-southeast-5b"
```

```

        "ZoneId": "ap-southeast-5b"
    },
    {
        "VpcEnabled": true,
        "ZoneId": "ap-southeast-5a"
    }
]
},
{
    "RegionId": "ap-northeast-1",
    "Zones": {
        "Zone": [
            {
                "VpcEnabled": true,
                "ZoneId": "ap-northeast-1b"
            },
            {
                "VpcEnabled": true,
                "ZoneId": "ap-northeast-1a"
            }
        ]
    }
},
{
    "RegionId": "ap-south-1",
    "Zones": {
        "Zone": [
            {
                "VpcEnabled": true,
                "ZoneId": "ap-south-1b"
            },
            {
                "VpcEnabled": true,
                "ZoneId": "ap-south-1a"
            }
        ]
    }
},
{
    "RegionId": "eu-central-1",
    "Zones": {
        "Zone": [
            {
                "VpcEnabled": true,
                "ZoneId": "eu-central-1b"
            }
        ]
    }
},
{
    "RegionId": "eu-west-1",
    "Zones": {
        "Zone": [

```

```
        "VpcEnabled": true,
        "ZoneId": "eu-west-1a"
    },
    {
        "VpcEnabled": true,
        "ZoneId": "eu-west-1b"
    }
]
},
{
    "RegionId": "us-west-1",
    "Zones": {
        "Zone": [
            {
                "VpcEnabled": true,
                "ZoneId": "us-west-1a"
            }
        ]
    }
},
{
    "RegionId": "us-east-1",
    "Zones": {
        "Zone": [
            {
                "VpcEnabled": true,
                "ZoneId": "us-east-1b"
            }
        ]
    }
}
]
```

Error codes

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

8.Cluster management

8.1. CreateDBCluster

Creates a PolarDB cluster.

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	CreateDBCluster	The operation that you want to perform. Set the value to CreateDBCluster .
RegionId	String	Yes	cn-hangzhou	The region ID of the cluster.  Note You can call the DescribeRegions operation to query available regions.
ZoneId	String	No	cn-hangzhou-g	The zone ID of the cluster.  Note You can call the DescribeRegions operation to query available zones.
DBType	String	Yes	MySQL	The type of the database engine. Valid values: - MySQL - PostgreSQL - Oracle

Parameter	Type	Required	Example	Description
DBVersion	String	Yes	5.6	The version of the database engine. - Valid values for the MySQL database engine: 5.6 5.7 8.0 - Valid value for the PostgreSQL database engine: 11 - Valid value for the Oracle database engine: 11
DBNodeClass	String	Yes	polar.mysql.x2.medium	The specifications of the node. - For more information about the MySQL database engine, see Specifications of compute nodes. - For more information about the Oracle database engine, see Specifications of compute nodes. - For more information about the PostgreSQL database engine, see Specifications of compute nodes.
ClusterNetworkType	String	No	VPC	The network type of the cluster. Only virtual private clouds (VPCs) are supported. Set the value to VPC.
DBClusterDescription	String	No	test	The name of the cluster. The name must meet the following requirements: - It cannot start with <code>http://</code> or <code>https://</code>. - It must be 2 to 256 characters in length.
PayType	String	Yes	Postpaid	The billing method of the cluster. Valid values: Postpaid: pay-as-you-go Prepaid: subscription

Parameter	Type	Required	Example	Description
AutoRenew	Boolean	No	true	Specifies whether to enable automatic renewal. Valid values: true: enables auto-renewal false: disables auto-renewal Default value: false.  Note This parameter is valid only when PayType is set to Prepaid.
Period	String	No	Month	The unit of the subscription period. This parameter is required if the PayType parameter is set to Prepaid. The subscription type of the subscription cluster. Year: annual subscription. Month: monthly subscription.
UsedTime	String	No	1	- If Period is set to Month, UsedTime can be set to 1, 2, 3, 4, 5, 6, 7, 8, or 9. - If Period is set to Year, UsedTime can be set to 1, 2, or 3.
VPCId	String	No	vpc-*****	The VPC ID of the cluster.
VSwitchId	String	No	vsw-*****	The vSwitch ID of the cluster.  Note If VPCId is selected, VSwitchId is required.
				The method that is used to create a cluster. Valid values: Normal: creates a new PolarDB cluster. For more information about how to perform this operation in the console, see the following topics: - Create a PolarDB for MySQL cluster - Create a PolarDB for PostgreSQL cluster - Create a PolarDB for Oracle cluster

Parameter	Type	Required	Example	Description
CreationOption	String	No	Normal	• CloneFromPolarDB: clones data from an existing PolarDB cluster to a new PolarDB cluster. For more information about how to perform this operation in the console, see the following topics: ◦ Clone a PolarDB for MySQL cluster ◦ Clone a PolarDB for PostgreSQL cluster ◦ Clone a PolarDB for Oracle cluster • CloneFromRDS: clones data from an existing ApsaraDB RDS for MySQL instance to a new PolarDB cluster. For more information about how to perform this operation in the console, see Create a PolarDB for MySQL cluster by using the Clone from RDS method. • MigrationFromRDS: migrates data from an existing ApsaraDB RDS for MySQL instance to a new PolarDB cluster. By default, the created PolarDB cluster is in read-only mode, and the binary logging feature is enabled. For more information about how to perform this operation in the console, see Create a PolarDB for MySQL cluster from an ApsaraDB RDS for MySQL instance. • CreateGdnStandby: creates a secondary cluster. For more information about how to perform this operation in the console, see Add a secondary cluster. Default value: Normal.  Note • If DBType is set to MySQL and DBVersion is set to 5.6 or 5.7, this parameter can be set to CloneFromRDS or MigrationFromRDS. • If DBType is set to MySQL and DBVersion is set to 8.0, this parameter can be set to CreateGdnStandby.

Parameter	Type	Required	Example	Description
SourceResourceId	String	No	rm-*****	The ID of the source ApsaraDB RDS instance or PolarDB cluster. This parameter is required only when CreationOption is set to MigrationFromRDS, CloneFromRDS, or CloneFromPolarDB. - If CreationOption is set to MigrationFromRDS or CloneFromRDS, you must set this parameter to the ID of the source RDS instance. The source RDS instance is of the ApsaraDB RDS for MySQL 5.6 or 5.7 High-availability Edition, and storage is local SSD. - If CreationOption is set to CloneFromPolarDB, you must set this parameter to the ID of the source PolarDB cluster. By default, the value of DBType of the destination cluster must be the same as that of the source cluster. For example, if a MySQL 8.0 cluster is used as the source cluster, you must set DBType to MySQL and DBVersion to 8.0 for the destination cluster.
CloneDataPoint	String	No	LATEST	The time point of data to be cloned. Valid values: LATEST: The data of the latest point in time is cloned. BackupID: Specify the ID of a backup set. Timestamp: Specify a point in time in the past. Specify the time in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time must be in UTC. Default value: LATEST.  Note If CreationOption is set to CloneFromRDS, the value of this parameter must be LATEST.

Parameter	Type	Required	Example	Description
ClientToken	String	No	6000170000591a ed949d0f5***** *****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length. The token is case-sensitive.
ResourceGroupId	String	No	rg-*****	The ID of the resource group.
SecurityIPList	String	No	10.***.***.***	The IP whitelist of the cluster. Note The whitelist can contain multiple IP addresses. Separate multiple IP addresses with commas (,).
TDEStatus	Boolean	No	true	Specifies whether to enable transparent data encryption (TDE). Default value: false. Valid values: true: enables TDE. false: disables TDE. Note - This parameter is valid only when DBType is set to PostgreSQL or Oracle. - You can call the ModifyDBClusterTDE operation to enable TDE for a PolarDB for MySQL cluster. - TDE cannot be disabled after it is enabled.
GDNId	String	No	gdn-*****	The ID of the Global Database Network (GDN). Note This parameter is required if CreationOption is set to CreateGdnStandby .

Parameter	Type	Required	Example	Description
CreationCategory	String	No	Normal	The edition of the cluster. Valid values: • Normal: Cluster Edition • Basic: Single Node Edition • ArchiveNormal: Archive Database Cluster Edition  Note • Only when DBType is set to MySQL and DBVersion is set to 5.6, 5.7, or 8.0, you can set this parameter to Basic. • Only when DBType is set to MySQL and DBVersion is set to 8.0, you can set this parameter to ArchiveNormal. For more information, see Product editions.

Parameter	Type	Required	Example	Description
DefaultTimeZone	String	No	SYSTEM	The time zone of the cluster. The time must be in UTC. You can set the parameter to a value that is on the hour from -12:00 to +13:00. Example: 00:00. Default value: SYSTEM, which means that the value is the same as the time zone of the region.  Note This parameter is valid only when DBType is set to MySQL.
LowerCaseTableNames	String	No	1	Specifies whether the table name is case-sensitive. Valid values: 1: The table names on the instance are case-insensitive. 0: The table names on the instance are case-sensitive. Default value: 1.  Note This parameter is valid only when DBType is set to MySQL.

Parameter	Type	Required	Example	Description
BackupRetentionPolicyOnClusterDeletion	String	No	NONE	The retention policy for the backup sets when you delete the cluster. Valid values: ALL: permanently retains all backups. LATEST: permanently retains the last backup. A backup is automatically created before you delete the cluster. NONE: No backup sets are retained after the cluster is deleted. The default value is NONE after you create a cluster. The default value NONE indicates that no backup sets are retained after the cluster is deleted.  Note This parameter is valid only when DBType is set to MySQL.
DBMinorVersion	String	No	8.0.1	The minor version of the database engine. - If DBVersion is 8.0, the valid values of this parameter are: 8.0.2 8.0.1 - If DBVersion is 5.7, the value of this parameter is 5.7.28. - If DBVersion is 5.6, the value of this parameter is 5.6.16.
ParameterGroupID	String	No	pcpg-*****	The ID of the parameter template.  Note You can call the DescribeParameterGroups operation to query the details of all parameter templates of a specified region, such as the ID of a parameter template.

Response parameters

Parameter	Type	Example	Description
RequestId	String	E56531A4-E552-40BA-9C58-137B80*****	The ID of the request.
ResourceGroupId	String	rg-*****	The ID of the resource group.
DBClusterId	String	pc-bp1s826a1up*****	The ID of the cluster.
OrderId	String	211454967*****	The ID of the order.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=CreateDBCluster
&DBNodeClass=polar.mysql.x2.medium
&DBType=MySQL
&DBVersion=5.6
&PayType=Postpaid
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateDBClusterResponse>
  <RequestId>E56531A4-E552-40BA-9C58-137B80*****</RequestId>
  <ResourceGroupId>rg-*****</ResourceGroupId>
  <DBClusterId>pc-bp1s826a1up*****</DBClusterId>
  <OrderId>211454967*****</OrderId>
</CreateDBClusterResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "E56531A4-E552-40BA-9C58-137B80*****",
  "ResourceGroupId" : "rg-*****",
  "DBClusterId" : "pc-bp1s826a1up*****",
  "OrderId" : "211454967*****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidBackupRetentionPolicyOnClusterDeletion.Malformed	The specified BackupRetentionPolicyOnClusterDeletion is invalid.	The error message returned because the specified BackupRetentionPolicyOnClusterDeletion parameter is invalid.
400	InvalidLowerCaseTableName.Malformed	The specified LowerCaseTableNames is invalid.	The error message returned because the specified LowerCaseTableNames parameter is invalid.
400	InvalidDefaultTimeZone.Malformed	The specified DefaultTimeZone is invalid.	The error message returned because the specified DefaultTimeZone parameter is invalid.
400	Location.FailedGetSubDomain	The specified regionId does not match the zoneId or the zoneId does not exist.	The error message returned because the specified region ID or zone ID is invalid or the specified zone ID does not exist.

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

8.2. DeleteDBCluster

Deletes a pay-as-you-go PolarDB cluster.

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	No	DeleteDBCluster	The operation that you want to perform. Set the value to DeleteDBCluster.
DBClusterId	String	Yes	pc-*****	The ID of the cluster.

Parameter	Type	Required	Example	Description
BackupRetentionPolicyOnClusterDeletion	String	No	NONE	The retention policy for the backup sets when you delete the cluster. Valid values: • ALL: permanently retains all the backups. • LATEST: permanently retains the last backup. A backup is automatically created before you delete the cluster. • NONE: retains no backup sets when you delete the cluster.

Response parameters

Parameter	Type	Example	Description
RequestId	String	D0CEC6AC-7760-409A-A0D5-E6CD86*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DeleteDBCluster
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteDBClusterResponse>
  <RequestId>D0CEC6AC-7760-409A-A0D5-E6CD86*****</RequestId>
</DeleteDBClusterResponse>
```

JSON format

```
{
  "RequestId": "D0CEC6AC-7760-409A-A0D5-E6CD86*****"
}
```

Error codes

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

8.3. DescribeDBClusters

Queries information about all PolarDB clusters or specified PolarDB clusters that you can access.

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	DescribeDBClusters	The operation that you want to perform. Set the value to DescribeDBClusters .
RegionId	String	Yes	cn-hangzhou	The region ID of the cluster.  Note You can call the DescribeRegions operation to query information about regions.
DBClusterIds	String	No	pc-*****	The IDs of the clusters. Separate cluster IDs with commas (,).
DBClusterDescription	String	No	pc-*****	The description of clusters. You can specify keywords to implement fuzzy match.
DBClusterStatus	String	No	Running	The state of the clusters that you want to query. For information about valid values, see Cluster status .
DBType	String	No	MySQL	The database engine that databases in the clusters run. Valid values: - MySQL - PostgreSQL - Oracle
PageSize	Integer	No	30	The number of entries to return on each page. Valid values: 30, 50, or 100. Default value: 30.

Parameter	Type	Required	Example	Description
PageNumber	Integer	No	10	The number of the page to return. The value of this parameter must be an integer that is greater than 0. Default value: 1.
ResourceGroupId	String	No	rg-*****	The ID of the resource group.
PayType	String	No	Postpaid	The billing method. Valid values: Postpaid: pay-as-you-go Prepaid: subscription
DBNodeIds	String	No	pi-*****	The ID of the node. You can specify multiple node IDs. Separate multiple node IDs with commas (,).
Tag.N.Key	String	No	MySQL	The keys of the tags. You can use tags to filter clusters. You can specify up to 20 tags. N specifies the serial number of each tag. The values that you specify for N must be unique and be consecutive integers that start from 1. The values of the Tag.N.Key parameter and the values of the Tag.N.Value parameter must be from the same key-value pairs.  Note The value of this parameter can be up to 64 characters in length and cannot start with <code>aliyun</code>, <code>acs:</code>, <code>http://</code>, or <code>https://</code>.
Tag.N.Value	String	No	5.6	The values of the tags.  Note The value of this parameter can be up to 64 characters in length and cannot start with <code>aliyun</code>, <code>acs:</code>, <code>http://</code>, or <code>https://</code>.

Response parameters

Parameter	Type	Example	Description
TotalRecordCount	Integer	16	The total number of entries.
PageRecordCount	Integer	5	The number of clusters returned per page.
RequestId	String	9B7BFB11-C077-4FE3-B051-F69CEB*****	The ID of the request.
PageNumber	Integer	12	The number of returned pages.
Items	Array of DBCluster		Details about the returned clusters.
DBCluster			
VpcId	String	vpc-*****	The ID of the virtual private cloud (VPC).
ExpireTime	String	2020-11-14T16:00:00Z	The time when the cluster expires.  Note Expiration time is returned only for clusters that use the subscription billing method. An empty string is returned for clusters that use the pay-as-you-go billing method.
Expired	String	false	Indicates whether the cluster has expired. Valid values:  Note This parameter is returned only for clusters that use the subscription billing method.
DBNodeNumber	Integer	2	The number of nodes.
CreateTime	String	2020-08-14T05:58:42Z	The time when the cluster was created.
PayType	String	Prepaid	The billing method. Valid values: Postpaid: pay-as-you-go Prepaid: the subscription billing method

Parameter	Type	Example	Description
DBNodeClass	String	polar.mysql.x4.large	The instance type of the node.
Tags	Array of Tag		Details about the returned tags.
Tag			
Key	String	MySQL	The key of the tag.
Value	String	5.6	The value of the tag.
DBType	String	MySQL	The database engine that databases in the clusters run.
LockMode	String	Unlock	The state of the cluster lock. Valid values: • Unlock: The instance is not locked. • ManualLock: The cluster is manually locked. • LockByExpiration: The cluster is automatically locked because the cluster has expired.
DBNodes	Array of DBNode		Details about nodes.
DBNode			
DBNodeClass	String	polar.mysql.x4.large	The instance type of the node.
Zoneld	String	cn-hangzhou-i	The ID of the zone.
DBNodeRole	String	Reader	The role of the node. Valid values: • Writer: The node is the primary node. • Reader: The node is a read-only node.
DBNodeid	String	pi-*****	The ID of the node.
RegionId	String	cn-hangzhou	The region ID of the cluster.
RegionId	String	cn-hangzhou	The region ID of the cluster.

Parameter	Type	Example	Description
DeletionLock	Integer	0	The protection state of the cluster. Valid values: 0: The cluster is not locked. 1: The cluster is locked.  Note You cannot delete the cluster if the cluster is locked.
DBVersion	String	5.6	The version of the database engine that databases in the clusters run.
DBClusterId	String	pc-*****	The IDs of the clusters.
DBClusterStatus	String	Running	The status of the cluster.
ResourceGroupId	String	rg-*****	The ID of the resource group.
StorageUsed	Long	3009413120	The storage space used by the cluster.
DBClusterNetworkType	String	VPC	The network type of the cluster.
DBClusterDescription	String	GDN-1	The description of the cluster.
ZoneId	String	cn-hangzhou-i	The ID of the zone.
Engine	String	POLARDB	The database engine that databases in the cluster run.
Category	String	Normal	The edition of the cluster. Valid values: Normal: Cluster Edition Basic: Single Node Archive: Archive Database

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeDBClusters
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDBClustersResponse>
  <TotalRecordCount>16</TotalRecordCount>
  <PageRecordCount>5</PageRecordCount>
  <RequestId>9B7BFB11-C077-4FE3-B051-F69CEB*****</RequestId>
  <PageNumber>12</PageNumber>
  <Items>
    <VpcId>vpc-*****</VpcId>
    <ExpireTime>2020-11-14T16:00:00Z</ExpireTime>
    <Expired>false</Expired>
    <DBNodeNumber>2</DBNodeNumber>
    <CreateTime>2020-08-14T05:58:42Z</CreateTime>
    <PayType>Prepaid</PayType>
    <DBNodeClass>polar.mysql.x4.large</DBNodeClass>
    <Tags>
      <Key>MySQL</Key>
      <Value>5.6</Value>
    </Tags>
    <DBType>MySQL</DBType>
    <LockMode>Unlock</LockMode>
    <DBNodes>
      <DBNodeClass>polar.mysql.x4.large</DBNodeClass>
      <ZoneId>cn-hangzhou-i</ZoneId>
      <DBNodeRole>Reader</DBNodeRole>
      <DBNodeId>pi-*****</DBNodeId>
      <RegionId>cn-hangzhou</RegionId>
    </DBNodes>
    <RegionId>cn-hangzhou</RegionId>
    <DeletionLock>0</DeletionLock>
    <DBVersion>5.6</DBVersion>
    <DBClusterId>pc-*****</DBClusterId>
    <DBClusterStatus>Running</DBClusterStatus>
    <ResourceGroupId>rg-*****</ResourceGroupId>
    <StorageUsed>3009413120</StorageUsed>
    <DBClusterNetworkType>VPC</DBClusterNetworkType>
    <DBClusterDescription>GDN-1</DBClusterDescription>
    <ZoneId>cn-hangzhou-i</ZoneId>
    <Engine>POLARDB</Engine>
    <Category>Normal</Category>
  </Items>
</DescribeDBClustersResponse>
```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalRecordCount" : 16,
  "PageRecordCount" : 5,
  "RequestId" : "9B7BFB11-C077-4FE3-B051-F69CEB*****",
  "PageNumber" : 12,
  "Items" : [ {
    "VpcId" : "vpc-*****",
    "ExpireTime" : "2020-11-14T16:00:00Z",
    "Expired" : "false",
    "DBNodeNumber" : 2,
    "CreateTime" : "2020-08-14T05:58:42Z",
    "PayType" : "Prepaid",
    "DBNodeClass" : "polar.mysql.x4.large",
    "Tags" : [ {
      "Key" : "MySQL",
      "Value" : "5.6"
    } ],
    "DBType" : "MySQL",
    "LockMode" : "Unlock",
    "DBNodes" : [ {
      "DBNodeClass" : "polar.mysql.x4.large",
      "ZoneId" : "cn-hangzhou-i",
      "DBNodeRole" : "Reader",
      "DBNodeId" : "pi-*****",
      "RegionId" : "cn-hangzhou"
    } ],
    "RegionId" : "cn-hangzhou",
    "DeletionLock" : 0,
    "DBVersion" : "5.6",
    "DBClusterId" : "pc-*****",
    "DBClusterStatus" : "Running",
    "ResourceGroupId" : "rg-*****",
    "StorageUsed" : 3009413120,
    "DBClusterNetworkType" : "VPC",
    "DBClusterDescription" : "GDN-1",
    "ZoneId" : "cn-hangzhou-i",
    "Engine" : "POLARDB",
    "Category" : "Normal"
  } ]
}

```

Error codes

HttpCode	Error codes	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred.

HttpCode	Error codes	Error message	Description
503	ServiceUnavailable	The request has failed due to a temporary failure of the server.	The error message returned because a temporary server failure has occurred.

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

8.4. DescribeDBClusterAttribute

Queries the detailed attributes of a PolarDB cluster.

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	DescribeDBClusterAttribute	The operation that you want to perform. Set the value to DescribeDBClusterAttribute .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query the details of the clusters that belong to your Alibaba Cloud account, such as cluster IDs.

Response parameters

Parameter	Type	Example	Description
DeletionLock	Integer	0	Indicates whether the cluster is locked and can be deleted. Valid values: 0: The cluster is not locked and can be deleted. 1: The cluster is locked and cannot be deleted.

Parameter	Type	Example	Description
Category	String	Normal	The edition of the PolarDB service. Valid values: Normal: Cluster Edition Basic: Single Node Edition Archive: Archive Database Edition NormalMultimaster: Multi-primary Cluster Edition  Note - Only PolarDB for MySQL supports Single Node Edition. - Only PolarDB for MySQL 8.0 supports Archive Database Edition and Multi-primary Cluster Edition.
ResourceGroupId	String	rg-*****	The ID of the resource group.
DataLevel1BackupChainSize	Long	74448896	The total physical storage of level-1 backups (snapshots). Unit: bytes.
DBClusterId	String	pc-*****	The ID of the cluster.
DBType	String	MySQL	The type of the database engine.
DBClusterNetworkType	String	VPC	The network type of the cluster.
IsLatestVersion	Boolean	false	Indicates whether the kernel is of the latest version. Valid values: true: yes false: no
StorageMax	Long	10995116277760	The maximum storage capacity of the current cluster specification. Unit: bytes.
DBVersion	String	8.0	The version of the database engine.
DBNodes	Array of DBNode		The details of the node.

Parameter	Type	Example	Description
CreationTime	String	2020-03-23T21:35:43Z	The time when the node was created.
FailoverPriority	Integer	1	The failover priority. Each node is assigned a failover priority. If a failover occurs, a node can be selected as a primary node. The priority determines the probability at which a node is selected as a primary node. A larger value indicates a higher priority. Valid values: 1 to 15.
MaxIOPS	Integer	32000	The maximum number of IOPS.
DBNodeClass	String	polar.mysql.x4.large	The instance type of the node.
DBNodeRole	String	Reader	The role of the node. Valid values: • Writer: The node is the primary node. • Reader: The node is a read-only node.
Zoneld	String	cn-hangzhou-i	The zone ID of the cluster.
MaxConnections	Integer	8000	The maximum number of concurrent connections in the cluster.

Parameter	Type	Example	Description
DBNodeStatus	String	Running	The status of the node. Valid values: • Creating: The cluster is being created. • Running: The cluster is running. • Deleting: The cluster is being deleted. • Rebooting: The cluster is restarting. • DBNodeCreating: The node is being added. • DBNodeDeleting: The node is being deleted. • ClassChanging: The specifications of the node are being changed. • NetAddressCreating: The network connection is being created. • NetAddressDeleting: The network connection is being deleted. • NetAddressModifying: The network connection is being modified. • MinorVersionUpgrading: The minor version is being updated. • Maintaining: The instance is being maintained. • Switching: A failover is being performed.
DBNodeId	String	pi-*****	The ID of the node.
ImciSwitch	String	ON	Specifies whether to enable the In-Memory Column Index (IMCI) feature. Valid values: • ON • OFF
HotReplicaMode	String	ON	Specifies whether to enable the hot standby feature. Valid values: • ON • OFF
AddedCpuCores	String	6	The number of CPU cores for compute node scale-out within seconds.
MasterId	String	pi-bp18z52akld3****	The ID of the primary node in the Multi-primary Cluster Edition cluster.

Parameter	Type	Example	Description
Zonelds	String	cn-hangzhou-i,cn-hangzhou-g	The zone ID of the cluster.
MaintainTime	String	18:00Z-19:00Z	The maintenance window of the cluster. The format is <code>HH:mmZ-HH:mmZ</code> . The time is displayed in UTC. For example, the value <code>16:00Z-17:00Z</code> indicates that the cluster can be maintained from 00:00 to 01:00 (UTC+08:00).
Engine	String	POLARDB	The cluster engine.
Tags	Array of Tag		The details of the tag.
Key	String	test	The tag key.
Value	String	MySQL	The tag value.
RequestId	String	074467EF-86B9-4C23-ACBF-E9B81A*****	The ID of the request.
VPCId	String	vpc-*****	The VPC ID of the cluster.

Parameter	Type	Example	Description
DBClusterStatus	String	Running	The status of the cluster. Valid values: Creating: The cluster is being created. Running: The cluster is running. Deleting: The cluster is being released. Rebooting: The cluster is restarting. DBNodeCreating: The node is being added. DBNodeDeleting: The node is being deleted. ClassChanging: The specifications of the node are being changed. NetAddressCreating: The network connection is being created. NetAddressDeleting: The network connection is being deleted. NetAddressModifying: The network connection is being modified. Deleted: The cluster is released. ClassChanged: The resources are being reclaimed after configuration change is completed.
VSwitchId	String	VSW- *****	The vSwitch ID of the cluster.
DBClusterDescription	String	test	The description of the cluster.
Expired	String	false	Indicates whether the cluster has expired. Valid values:  Note This parameter is returned only for clusters that use the subscription billing method.
PayType	String	Prepaid	The billing method. Valid values: Postpaid: pay-as-you-go Prepaid: subscription

Parameter	Type	Example	Description
LockMode	String	Unlock	The lock mode. Valid values: Unlock: The cluster is not locked. ManualLock: The cluster is manually locked. LockByExpiration: The cluster is automatically locked because the cluster has expired.
StorageUsed	Long	3012558848	The storage space consumed by the cluster. Unit: bytes.
DBVersionStatus	String	Stable	The status of the minor version. Valid values: Stable: The minor version is stable. Old: The minor version is outdated. We recommend that you upgrade the cluster to the latest version. HighRisk: The minor version has critical defects. We recommend that you immediately upgrade the cluster to the latest version.  Note For more information about how to upgrade the minor version, see Upgrade versions.
CreationTime	String	2020-08-14T05:58:42Z	The time when the cluster was created.
SQLSize	Long	0	The storage of SQL. Unit: bytes. If the value is -1, no data is stored.
RegionId	String	cn-hangzhou	The region ID of the cluster.
ExpireTime	String	2020-11-14T16:00:00Z	The time when the cluster expires.  Note Expiration time is returned only for clusters that use the subscription billing method. An empty string is returned for clusters that use the pay-as-you-go billing method.

Parameter	Type	Example	Description
SubCategory	String	Exclusive	The specification type of the compute node. Valid values: • Exclusive: dedicated • General: general-purpose  Note This parameter is returned for only PolarDB for MySQL clusters of Cluster Edition.
IsProxyLatestVersion	Boolean	false	Indicates whether PolarProxy uses the latest version. Valid values: • true: yes • false: no
StorageType	String	HighPerformance	The storage type. Set the value to HighPerformance .
ProxyCpuCores	String	4	The number of CPU cores for PolarProxy.
ProxyStandardCpuCores	String	2	The number of CPU cores for PolarProxy Standard Enterprise Edition.
ProxyType	String	Exclusive	The type of PolarProxy. Valid values: • Exclusive: Dedicated Enterprise Edition • General: Standard Enterprise Edition

Parameter	Type	Example	Description
ProxyStatus	String	Running	The status of PolarProxy. Valid values: Creating: PolarProxy is being created. Running: PolarProxy is running. Deleting: PolarProxy is being released. Rebooting: PolarProxy is restarting. DBNodeCreating: The node is being added. DBNodeDeleting: The node is being deleted. ClassChanging: The specifications of the node are being changed. NetAddressCreating: The network connection is being created. NetAddressDeleting: The network connection is being deleted. NetAddressModifying: The network connection is being modified. Deleted: PolarProxy is released.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeDBClusterAttribute
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDBClusterAttributeResponse>
  <DeletionLock>0</DeletionLock>
  <Category>Normal</Category>
  <ResourceGroupId>rg-*****</ResourceGroupId>
  <DataLevel1BackupChainSize>74448896</DataLevel1BackupChainSize>
  <DBClusterId>pc-*****</DBClusterId>
  <DBType>MySQL</DBType>
  <DBClusterNetworkType>VPC</DBClusterNetworkType>
  <IsLatestVersion>>false</IsLatestVersion>
  <StorageMax>1099511627760</StorageMax>
  <DBVersion>8.0</DBVersion>
  <DBNodes>
    <CreationTime>2020-03-23T21:35:43Z</CreationTime>
    <FailoverPriority>1</FailoverPriority>
    <MaxIOPS>32000</MaxIOPS>
```

```

    <DBNodeClass>polar.mysql.x4.large</DBNodeClass>
    <DBNodeRole>Reader</DBNodeRole>
    <ZoneId>cn-hangzhou-i</ZoneId>
    <MaxConnections>8000</MaxConnections>
    <DBNodeStatus>Running</DBNodeStatus>
    <DBNodeId>pi-*****</DBNodeId>
    <ImciSwitch>ON</ImciSwitch>
    <HotReplicaMode>ON</HotReplicaMode>
    <AddedCpuCores>6</AddedCpuCores>
    <MasterId>pi-bp18z52akld3*****</MasterId>
  </DBNodes>
  <ZoneIds>cn-hangzhou-i,cn-hangzhou-g</ZoneIds>
  <MaintainTime>18:00Z-19:00Z</MaintainTime>
  <Engine>POLARDB</Engine>
  <Tags>
    <Key>test</Key>
    <Value>MySQL</Value>
  </Tags>
  <RequestId>074467EF-86B9-4C23-ACBF-E9B81A*****</RequestId>
  <VPCId>vpc-*****</VPCId>
  <DBClusterStatus>Running</DBClusterStatus>
  <VSwitchId>vsw-*****</VSwitchId>
  <DBClusterDescription>test</DBClusterDescription>
  <Expired>false</Expired>
  <PayType>Prepaid</PayType>
  <LockMode>Unlock</LockMode>
  <StorageUsed>3012558848</StorageUsed>
  <DBVersionStatus>Stable</DBVersionStatus>
  <CreationTime>2020-08-14T05:58:42Z</CreationTime>
  <SQLSize>0</SQLSize>
  <RegionId>cn-hangzhou</RegionId>
  <ExpireTime>2020-11-14T16:00:00Z</ExpireTime>
  <SubCategory>Exclusive</SubCategory>
  <IsProxyLatestVersion>false</IsProxyLatestVersion>
  <StorageType>HighPerformance</StorageType>
  <ProxyCpuCores>4</ProxyCpuCores>
  <ProxyStandardCpuCores>2</ProxyStandardCpuCores>
  <ProxyType>Exclusive</ProxyType>
  <ProxyStatus>Running</ProxyStatus>
</DescribeDBClusterAttributeResponse>

```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "DeletionLock" : 0,
  "Category" : "Normal",
  "ResourceGroupId" : "rg-*****",
  "DataLevel1BackupChainSize" : 74448896,
  "DBClusterId" : "pc-*****",
  "DBType" : "MySQL",
  "DBClusterNetworkType" : "VPC",
  "DBClusterStatus" : "Running",
  "DBNodeClass" : "polar.mysql.x4.large",
  "DBNodeRole" : "Reader",
  "ZoneId" : "cn-hangzhou-i",
  "MaxConnections" : 8000,
  "DBNodeStatus" : "Running",
  "DBNodeId" : "pi-*****",
  "ImciSwitch" : "ON",
  "HotReplicaMode" : "ON",
  "AddedCpuCores" : 6,
  "MasterId" : "pi-bp18z52akld3*****",
  "ZoneIds" : "cn-hangzhou-i,cn-hangzhou-g",
  "MaintainTime" : "18:00Z-19:00Z",
  "Engine" : "POLARDB",
  "Tags" : {
    "test" : "MySQL"
  },
  "RequestId" : "074467EF-86B9-4C23-ACBF-E9B81A*****",
  "VPCId" : "vpc-*****",
  "DBClusterStatus" : "Running",
  "VSwitchId" : "vsw-*****",
  "DBClusterDescription" : "test",
  "Expired" : false,
  "PayType" : "Prepaid",
  "LockMode" : "Unlock",
  "StorageUsed" : 3012558848,
  "DBVersionStatus" : "Stable",
  "CreationTime" : "2020-08-14T05:58:42Z",
  "SQLSize" : 0,
  "RegionId" : "cn-hangzhou",
  "ExpireTime" : "2020-11-14T16:00:00Z",
  "SubCategory" : "Exclusive",
  "IsProxyLatestVersion" : false,
  "StorageType" : "HighPerformance",
  "ProxyCpuCores" : 4,
  "ProxyStandardCpuCores" : 2,
  "ProxyType" : "Exclusive",
  "ProxyStatus" : "Running"
}

```

```

    "IsLatestVersion" : false,
    "StorageMax" : 10995116277760,
    "DBVersion" : "8.0",
    "DBNodes" : [ {
      "CreationTime" : "2020-03-23T21:35:43Z",
      "FailoverPriority" : 1,
      "MaxIOPS" : 32000,
      "DBNodeClass" : "polar.mysql.x4.large",
      "DBNodeRole" : "Reader",
      "ZoneId" : "cn-hangzhou-i",
      "MaxConnections" : 8000,
      "DBNodeStatus" : "Running",
      "DBNodeId" : "pi-*****",
      "ImciSwitch" : "ON",
      "HotReplicaMode" : "ON",
      "AddedCpuCores" : "6",
      "MasterId" : "pi-bp18z52akld3*****"
    } ],
    "ZoneIds" : "cn-hangzhou-i,cn-hangzhou-g",
    "MaintainTime" : "18:00Z-19:00Z",
    "Engine" : "POLARDB",
    "Tags" : [ {
      "Key" : "test",
      "Value" : "MySQL"
    } ],
    "RequestId" : "074467EF-86B9-4C23-ACBF-E9B81A*****",
    "VPCId" : "vpc-*****",
    "DBClusterStatus" : "Running",
    "VSwitchId" : "vsw-*****",
    "DBClusterDescription" : "test",
    "Expired" : "false",
    "PayType" : "Prepaid",
    "LockMode" : "Unlock",
    "StorageUsed" : 3012558848,
    "DBVersionStatus" : "Stable",
    "CreationTime" : "2020-08-14T05:58:42Z",
    "SQLSize" : 0,
    "RegionId" : "cn-hangzhou",
    "ExpireTime" : "2020-11-14T16:00:00Z",
    "SubCategory" : "Exclusive",
    "IsProxyLatestVersion" : false,
    "StorageType" : "HighPerformance",
    "ProxyCpuCores" : "4",
    "ProxyStandardCpuCores" : "2",
    "ProxyType" : "Exclusive",
    "ProxyStatus" : "Running"
  }
}

```

Error codes

HttpCode	Error code	Error message	Description
----------	------------	---------------	-------------

HttpCode	Error code	Error message	Description
404	InvalidDBCluster.NotFound	The DBClusterId provided does not exist in our records.	The error message returned because the specified DBClusterId does not exist in the current record.

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

8.5. DescribeTasks

Queries further details of the tasks that are generated based on API operations. For example, you can call this operation to view the details of the task when you create a cluster.

- You can call this operation to view the details of a task that is generated by a specific API operation or in the console. The system calls the specific API operation when you perform an operation in the console. For example, you can view the details of the task when you call the [CreateDBCluster](#) operation or [create a cluster](#) in the console.
- You can view the details of tasks that are generated only when you call the [CreateDBCluster](#) operation to create a cluster and `CreationOption` is not set to `CreateGdnStandby`.

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	DescribeTasks	The operation that you want to perform. Set the value to DescribeTasks .
DBClusterId	String	No	pc-*****	The ID of the cluster.  Note You must specify <code>DBNodeId</code> or <code>DBClusterId</code>. You can call the DescribeDBClusters operation to query the details of the clusters that belong to your Alibaba Cloud account, such as cluster IDs.

Parameter	Type	Required	Example	Description
DBNodeId	String	No	pi-*****	The ID of the node.  Note You must specify <code>DBNodeId</code> or <code>DBClusterId</code>. You can call the DescribeDBClusters operation to query the details of the clusters that belong to your Alibaba Cloud account, such as cluster IDs.
StartTime	String	Yes	2020-11-30T00:00Z	The beginning of the time range to query. Specify the time in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time must be in UTC.
EndTime	String	Yes	2020-12-02T03:00Z	The end of the time range to query. Specify the time in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time must be in UTC. The end time must be later than the start time.
Status	String	No	Running	The state of the tasks that you want to query. Valid values: Waiting: The task is pending. Running: The task is running. Finished: The task is completed. Closed: The task is closed. Pause: The task is paused. Stop: The task is interrupted.  Note If you do not specify this parameter, the operation returns the details of only the tasks that are in the Waiting or Running state for the cluster or node.
PageSize	Integer	No	30	The number of entries to return on each page. Valid values: 30, 50, or 100. Default value: 30.

Parameter	Type	Required	Example	Description
PageNumber	Integer	No	1	The number of the page to return. The value must be an integer that is greater than 0. Default value: 1.

Response parameters

Parameter	Type	Example	Description
TotalRecordCount	Integer	1	The total number of entries.
PageRecordCount	Integer	30	The number of entries returned per page.
Tasks	Array of Task		Details about the tasks.
Task			
FinishTime	String	2020-12-02T02:40:15Z	The time when the task was completed. The time is in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time is displayed in UTC.
StepsInfo	String	[{"remain":0,"name":"init_task","progress":100}, {"remain":1764,"name":"create_instance","progress":0}, {"remain":1,"name":"init_cluster","progress":0}, {"remain":2,"name":"create_backup","progress":0}]	Details about the subtasks.
Progress	Integer	100	The progress of the task in percentage.
ExpectedFinishTime	String	null	The estimated end time. In most cases, this parameter is empty.
BeginTime	String	2020-12-02T02:39:15Z	The time when the task was started. The time is in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time is displayed in UTC.

Parameter	Type	Example	Description
TaskErrorCode	String	null	The error code that is returned when an error occurs.  Note This parameter is returned only when the task is in the Stop state.
ProgressInfo	String	null	The description about the task progress. If no progress description is provided for the task, this parameter is empty.
CurrentStepName	String	create_instance	The name of the current step.
StepProgressInfo	String	1/4	The progress of the subtasks. For example, a value of <code>1/4</code> indicates that the task consists of four subtasks and the first subtask is in progress.
TaskErrorMessage	String	null	The error message that is returned when an error occurs.  Note This parameter is returned only when the task is in the Stop state.
TaskAction	String	CreateDBInstance	The API operation that is used by the task, such as <code>CreateDBInstance</code> .
DBName	String	test	The name of the database whose tables you want to query.  Note This parameter is returned for only the tasks that involve database operations.
Remain	Integer	1767	The estimated remaining duration of the task. Unit: seconds.
TaskId	String	111111111	The ID of the task.
EndTime	String	2020-12-02T03:00Z	The end of the time range.

Parameter	Type	Example	Description
RequestId	String	4352AD99-9FF5-41A6-A319-068089*****	The ID of the request.
PageNumber	Integer	1	The number of the returned page.
StartTime	String	2020-11-30T00:00Z	The beginning of the time range.
DBClusterId	String	pc-*****	The ID of the cluster for which the task was created.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeTasks
&EndTime=2020-11-30T00:00Z
&StartTime=2020-12-01T10:00Z
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeTasksResponse>
<TotalRecordCount>1</TotalRecordCount>
<PageRecordCount>30</PageRecordCount>
<Tasks>
  <Task>
    <StepProgressInfo>1/4</StepProgressInfo>
    <Progress>25</Progress>
    <TaskId>111111111</TaskId>
    <Remain>1767</Remain>
    <FinishTime>2020-12-02T02:40:15Z</FinishTime>
    <TaskAction>CreateDBInstance</TaskAction>
    <StepsInfo>[{"remain":0,"name":"init_task","progress":100}, {"remain":1764,"name":"create_instance","progress":0}, {"remain":1,"name":"init_cluster","progress":0}, {"remain":2,"name":"create_backup","progress":0}]</StepsInfo>
    <CurrentStepName>create_instance</CurrentStepName>
    <BeginTime>2020-12-02T02:39:15Z</BeginTime>
  </Task>
</Tasks>
<RequestId>45CE02A1-1766-42E3-9E5F-24B576*****</RequestId>
<EndTime>2020-12-02T03:00Z</EndTime>
<PageNumber>1</PageNumber>
<StartTime>2020-11-30T00:00Z</StartTime>
<DBClusterId>pc-*****</DBClusterId>
</DescribeTasksResponse>
```

JSON **format**

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalRecordCount" : 1,
  "PageRecordCount" : 30,
  "Tasks" : {
    "Task" : [ {
      "StepProgressInfo" : "1/4",
      "Progress" : 25,
      "TaskId" : "111111111",
      "Remain" : 1767,
      "FinishTime" : "2020-12-02T02:40:15Z",
      "TaskAction" : "CreateDBInstance",
      "StepsInfo" : "[{\\"remain\\":0,\\\"name\\":\\\"init_task\\\",\\\"progress\\":100},{\\"remain\\":1764,\\\"name\\":\\\"create_instance\\\",\\\"progress\\":0},{\\"remain\\":1,\\\"name\\":\\\"init_cluster\\\",\\\"progress\\":0},{\\"remain\\":2,\\\"name\\":\\\"create_backup\\\",\\\"progress\\":0}]",
      "CurrentStepName" : "create_instance",
      "BeginTime" : "2020-12-02T02:39:15Z"
    } ]
  },
  "RequestId" : "45CE02A1-1766-42E3-9E5F-24B576*****",
  "EndTime" : "2020-12-02T03:00Z",
  "PageNumber" : 1,
  "StartTime" : "2020-11-30T00:00Z",
  "DBClusterId" : "pc-*****"
}

```

Error code

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

8.6. ModifyDBClusterDescription

Modifies the name of a PolarDB cluster.

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	No	ModifyDBClusterDescription	The operation that you want to perform. Set the value to ModifyDBClusterDescription .

Parameter	Type	Required	Example	Description
DBClusterDescription	String	Yes	ClusterDescriptionTest	The name of the cluster. The name must meet the following requirements: - The name cannot start with <code>http://</code> or <code>https://</code>. - The name must be 2 to 256 characters in length.
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster.

Response parameters

Parameter	Type	Example	Description
RequestId	String	D0CEC6AC-7760-409A-A0D5-E6CD86*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=ModifyDBClusterDescription
&DBClusterDescription=ClusterDescriptionTest
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDBClusterDescriptionResponse>
  <RequestId>D0CEC6AC-7760-409A-A0D5-E6CD86*****</RequestId>
</ModifyDBClusterDescriptionResponse>
```

JSON format

```
{
  "RequestId": "D0CEC6AC-7760-409A-A0D5-E6CD86*****"
}
```

Error codes

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

8.7. ModifyDBClusterMaintainTime

Changes the routine maintenance window of a specified PolarDB cluster.

 **Note** We recommend that you set the routine maintenance window to off-peak hours. Alibaba Cloud maintains your cluster within the specified maintenance window to minimize the negative impacts on your business.

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	Position	Type	Required	Example	Description
Action	Query	String	No	ModifyDBClusterMaintainTime	The operation that you want to perform. Set the value to ModifyDBClusterMaintainTime .
DBClusterId	Query	String	Yes	pc-*****	The ID of the PolarDB cluster.
MaintainTime	Query	String	Yes	02:00Z-03:00Z	The maintenance window of the cluster. The format is <code>HH:mmZ-HH:mmZ</code>. For example, a value of <code>16:00Z-17:00Z</code> indicates that the routine maintenance can be performed on the cluster from 00:00 to 01:00 (UTC+08:00).  Note The maintenance window must start on the hour and last for an hour.

Response parameters

Parameter	Type	Example	Description
RequestId	String	70656639-1416-479F-AF13-D08197*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=ModifyDBClusterMaintainTime
&DBClusterId=pc-*****
&MaintainTime=02:00Z-03:00Z
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDBClusterMaintainTimeResponse>
  <RequestId>70656639-1416-479F-AF13-D08197*****</RequestId>
</ModifyDBClusterMaintainTimeResponse>
```

JSON format

```
{
  "RequestId": "70656639-1416-479F-AF13-D08197*****"
}
```

Error codes

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

8.8. Deployment architecture

8.8.1. ModifyDBClusterPrimaryZone

Switches the primary zone of a PolarDB cluster.

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	ModifyDBClusterPrimaryZone	The operation that you want to perform. Set the value to ModifyDBClusterPrimaryZone .

Parameter	Type	Required	Example	Description
DBClusterId	String	Yes	pc-*****	The ID of the cluster. Note You can call the DescribeDBClusters operation to query information about all your PolarDB clusters that are deployed in a specified region. The returned information includes the ID of each cluster.
ZoneId	String	Yes	cn-hangzhou-g	The ID of the destination primary zone. Note You can call the DescribeRegions operation to query available zones.
VSwitchId	String	No	vsw-*****	The vSwitch ID of in the destination primary zone. Note - This parameter is required if your cluster is a PolarDB for Oracle cluster or a PolarDB for PostgreSQL cluster. - If your cluster is a PolarDB for PostgreSQL cluster: - this parameter is optional if no vSwitches have been created in the destination zone. The default vSwitch is used. - this parameter is required if a vSwitch has been created in the destination zone.

Parameter	Type	Required	Example	Description
PlannedStartTime	String	No	2021-01-14T09:00:00Z	The earliest time to switch the primary zone within the scheduled time period. Specify the parameter in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time must be in UTC.  Note - The earliest start time of the task can be a point in time within the next 24 hours. For example, if the current time is <code>2021-01-14T09:00:00Z</code>, you can specify a point in the time range from <code>2021-01-14T09:00:00Z</code> to <code>2021-01-15T09:00:00Z</code>. - If this parameter is empty, the primary zone is immediately switched.

Parameter	Type	Required	Example	Description
PlannedEndTime	String	No	2021-01-14T09:30:00Z	The latest start time to run the task. Specify the time in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time must be in UTC. Note - The value of this parameter must be at least 30 minutes later than the value of the <code>PlannedStartTime</code> parameter. - If you specify the <code>PlannedStartTime</code> parameter but do not specify a value for the <code>PlannedEndTime</code> parameter, the latest start time of the task is set to a value that is calculated by the value of the <code>PlannedEndTime</code> parameter + 30 minutes by default. For example, if you set the <code>PlannedStartTime</code> parameter to <code>2021-01-14T09:00:00Z</code> and you do not specify the <code>PlannedEndTime</code> parameter, the latest start time of the task is set to <code>2021-01-14T09:30:00Z</code>.
FromTimeService	Boolean	No	false	Specify an immediate or scheduled task to switch the primary zone. Default value: false. Valid values: - false: scheduled task - true: immediate task

Response parameters

Parameter	Type	Example	Description
RequestId	String	ED12C6FF-3261-4571-AB57-3570F6*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=ModifyDBClusterPrimaryZone
&DBClusterId=pc-*****
&ZoneId=cn-hangzhou-g
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyDBClusterPrimaryZoneResponse>
<RequestId>ED12C6FF-3261-4571-AB57-3570F6*****</RequestId>
</ModifyDBClusterPrimaryZoneResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "ED12C6FF-3261-4571-AB57-3570F6*****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	ScheduleTaskExist	The specified cluster already has a scheduled task.	The error code returned because a different task is scheduled to run on the specified cluster.
404	InvalidDBCluster.NotFound	The DBClusterId provided does not exist in our records.	The error message returned because the specified DBClusterId does not exist in the current record.

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

8.8.2. FailoverDBCluster

Performs a failover between the primary node and a read-only node in a PolarDB cluster.

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	No	FailoverDBCluster	The operation that you want to perform. Set the value to FailoverDBCluster .
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster.

Parameter	Type	Required	Example	Description
TargetDBNodeId	String	No	pi-*****	The ID of the read-only node that serves as the new primary node. If you leave this parameter empty, the system automatically selects a read-only node. You can call the DescribeDBClusters operation to query node information, such as node IDs.  Note - If you leave this parameter empty, the system selects one or more nodes that have the highest priority from all the available read-only nodes. If the failover to the first read-only node fails due to network issues, abnormal replication status, or other reasons, the system tries to switch to another read-only node until the failover succeeds. - If the database engine of the PolarDB cluster is PolarDB for Oracle or the PolarDB for PostgreSQL-compatible edition, this parameter is required. If the database engine of the PolarDB cluster is the ApsaraDB PolarDB MySQL-compatible edition, this parameter is optional.
ClientToken	String	No	6000170000591aed949d0f54a343f1a4233c1e7d1c5* *****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length. The token is case-sensitive.

Response parameters

Parameter	Type	Example	Description
RequestId	String	D0CEC6AC-7760-409A-A0D5-E6CD86*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=FailoverDBCluster
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<FailoverDBClusterResponse>
<RequestId>D0CEC6AC-7760-409A-A0D5-E6CD86*****</RequestId>
</FailoverDBClusterResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "D0CEC6AC-7760-409A-A0D5-E6CD86*****"
}
```

Error codes

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

8.9. Renewal management

8.9.1. DescribeDBClusterAvailableResources

Queries PolarDB resources that are available.

Debugging

Alibaba Cloud provides OpenAPI Explorer to simplify API usage. 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	DescribeDBClusterAvailableResources	The operation that you want to perform. Set the value to DescribeDBClusterAvailableResources .
PayType	String	Yes	Postpaid	The billing method. Valid values: Postpaid: the pay-as-you-go billing method Prepaid: the subscription billing method
DBType	String	No	MySQL	The database engine. Valid values: MySQL PostgreSQL Oracle
DBVersion	String	No	5.6	The version number of the database engine - Valid values for the MySQL database engine: 5.6 5.7 8.0 - Valid value for the PostgreSQL database engine: 11 - Valid value for the Oracle database engine: 11  Note If you specify the DBType parameter, you must specify this parameter.
DBNodeClass	String	No	polar.mysql.x4.large	The node type. For more information, see Specifications of compute nodes .

Parameter	Type	Required	Example	Description
RegionId	String	No	cn-hangzhou	The ID of the region where PolarDB resources that you want to query reside. Default value: cn-hangzhou.  Note You can call the DescribeRegions operation to query information about regions.
ZoneId	String	No	cn-hangzhou-i	The ID of the zone where PolarDB resources that you want to query reside.  Note You can call the DescribeRegions operation to query information about zones.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2B19F698-8FFC-4918-B9E2-58D878*****	The ID of the request.
AvailableZones	Array of AvailableZone		The information about the PolarDB resources that are available.
SupportedEngines	Array of SupportedEngine		The database engines that the available resources support.
Engine	String	mysql57	The version of the database engine.
AvailableResources	Array of AvailableResource		The list of available resources.
DBNodeClass	String	polar.mysql.x4.large	The node type.

Parameter	Type	Example	Description
Category	String	Normal	The edition of clusters that are available. Valid values: • Normal: Cluster Edition • Basic: Single Node Edition • Archive: Archive Database Edition
ZoneId	String	cn-hangzhou-i	The ID of the zone where the type of available resources reside.
RegionId	String	cn-hangzhou	The ID of the region where the type of available resources reside.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeDBClusterAvailableResources
&PayType=Postpaid
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDBClusterAvailableResourcesResponse>
  <RequestId>2B19F698-8FFC-4918-B9E2-58D878*****</RequestId>
  <AvailableZones>
    <SupportedEngines>
      <Engine>mysql57</Engine>
    <AvailableResources>
      <DBNodeClass>polar.mysql.x4.large</DBNodeClass>
      <Category>Normal</Category>
    </AvailableResources>
  </SupportedEngines>
  <ZoneId>cn-hangzhou-i</ZoneId>
  <RegionId>cn-hangzhou</RegionId>
</AvailableZones>
</DescribeDBClusterAvailableResourcesResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "2B19F698-8FFC-4918-B9E2-58D878*****",
  "AvailableZones" : [ {
    "SupportedEngines" : [ {
      "Engine" : "mysql57",
      "AvailableResources" : [ {
        "DBNodeClass" : "polar.mysql.x4.large",
        "Category" : "Normal"
      } ]
    } ],
    "ZoneId" : "cn-hangzhou-i",
    "RegionId" : "cn-hangzhou"
  } ]
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidEngineVersion. Malformed	The specified parameter EngineVersion is not valid.	The error code returned because the specified value for the DBVersion parameter is invalid.

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

8.9.2. DescribeAutoRenewAttribute

Queries the auto-renewal status of subscription PolarDB clusters.

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	No	DescribeAutoRenewAttribute	The operation that you want to perform. Set the value to DescribeAutoRenewAttribute .

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region.  Note You can call the DescribeRegions operation to query the region ID details.
DBClusterIds	String	No	pc-*****	The ID of the cluster. If you need to specify multiple cluster IDs, separate the cluster IDs with commas (,).
PageSize	Integer	No	30	The number of entries to return on each page. Valid values: 30, 50, and 100. Default value: 30.
PageNumber	Integer	No	1	The page number. The value must be an integer that is larger than 0 and does not exceed the maximum value of the INTEGER data type. Default value: 1.
ResourceGroupId	String	No	rg-re*****	The ID of the resource group.

Response parameters

Parameter	Type	Example	Description
Items	Array of AutoRenewAttribute		The renewal information about the clusters.
AutoRenewAttribute			
AutoRenewEnabled	Boolean	true	Indicates whether the auto-renewal feature is enabled. Valid values: - true: enabled - false: disabled
DBClusterId	String	pc-*****	The ID of the cluster.
Duration	Integer	4	The renewal duration.

Parameter	Type	Example	Description
PeriodUnit	String	Month	The unit of the duration. Valid values: • Year • Month
RegionId	String	cn-hangzhou	The ID of the region.
RenewalStatus	String	AutoRenewal	The renewal status. Valid values: • AutoRenewal: The cluster is automatically renewed. • Normal: The cluster is manually renewed. The system sends a text message to remind you before the cluster expires. • NotRenewal: The cluster is not renewed. The system does not send a reminder for expiration but only sends a text message three days before the cluster expires to remind you that the cluster is not renewed.
PageNumber	Integer	1	The page number of the returned page.
PageRecordCount	Integer	1	The total number of pages returned.
RequestId	String	65D7ACE6-4A61-4B6E-B357-8CB24A*****	The ID of the request.
TotalRecordCount	Integer	1	The total number of entries.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DescribeAutoRenewAttribute
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeAutoRenewAttributeResponse>
  <TotalRecordCount>1</TotalRecordCount>
  <PageRecordCount>1</PageRecordCount>
  <RequestId>65D7ACE6-4A61-4B6E-B357-8CB24A*****</RequestId>
  <PageNumber>1</PageNumber>
  <Items>
    <AutoRenewAttribute>
      <AutoRenewEnabled>true</AutoRenewEnabled>
      <DBClusterId>pc-*****</DBClusterId>
      <RenewalStatus>AutoRenewal</RenewalStatus>
      <Duration>4</Duration>
      <RegionId>cn-hangzhou</RegionId>
      <PeriodUnit>Month</PeriodUnit>
    </AutoRenewAttribute>
  </Items>
</DescribeAutoRenewAttributeResponse>
```

JSON **format**

```
{
  "TotalRecordCount": 1,
  "PageRecordCount": 1,
  "RequestId": "65D7ACE6-4A61-4B6E-B357-8CB24A*****",
  "PageNumber": 1,
  "Items": {
    "AutoRenewAttribute": [
      {
        "AutoRenewEnabled": true,
        "DBClusterId": "pc-*****",
        "RenewalStatus": "AutoRenewal",
        "Duration": 4,
        "RegionId": "cn-hangzhou",
        "PeriodUnit": "Month"
      }
    ]
  }
}
```

Error codes

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

8.9.3. ModifyAutoRenewAttribute

Modifies auto-renewal parameters for a subscription PolarDB cluster.

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	Position	Type	Required	Example	Description
Action	Query	String	No	ModifyAutoRenewAttribute	The operation that you want to perform. Set the value to ModifyAutoRenewAttribute .
DBClusterIds	Query	String	Yes	pc- *****	The ID of the PolarDB cluster.
RegionId	Query	String	Yes	cn-hangzhou	The ID of the region. It must be 1 to 50 characters in length.  Note You can call the DescribeRegions operation to query available regions.
RenewalStatus	Query	String	No	AutoRenewal	Specifies the auto-renewal status of the cluster. Valid values: AutoRenewal: The cluster is automatically renewed. Normal: The cluster is manually renewed. NotRenewal: The cluster is not renewed. Default value: AutoRenewal  Note If this parameter is set to NotRenewal , the system does not send a reminder of expiration, but only sends a reminder three days before the cluster expires to remind you that the cluster is not renewed.

Parameter	Position	Type	Required	Example	Description
Duration	Query	String	No	1	Specifies the automatic renewal period. - When the PeriodUnit parameter is set to Month, the value of this parameter is [1, 2, 3, 6, 12] . - When the PeriodUnit parameter is set to Year, the value of this parameter is [1-3] . Default value: 1.
PeriodUnit	Query	String	No	Month	The unit of the renewal period. Valid values: Year Month Default value: Month.
ResourceGroupId	Query	String	No	rg-*****	The ID of the resource group.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4CE6DF97-AEA4-484F-906F-C407EE*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=ModifyAutoRenewAttribute
&DBClusterIds=pc-*****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyAutoRenewAttributeResponse>
  <RequestId>4CE6DF97-AEA4-484F-906F-C407EE*****</RequestId>
</ModifyAutoRenewAttributeResponse>
```


JSON **format**

```
{
  "ModifyAutoRenewAttributeResponse": {
    "RequestId": "4CE6DF97-AEA4-484F-906F-C407EE*****"
  }
}
```

Error codes

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

9. Kernel

9.1. DescribeDBClusterVersion

Queries the kernel details of a PolarDB cluster of the ApsaraDB PolarDB MySQL-compatible edition.

 **Note** For more information, see [Version of the PolarDB database kernel](#) and [Release notes for the PolarDB kernel](#).

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	No	DescribeDBClusterVersion	The operation that you want to perform. Set the value to DescribeDBClusterVersion .
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster.  Note You can call the DescribeDBClusters operation to query the details of each cluster that belongs to your account, such as the cluster ID.

Response parameters

Parameter	Type	Example	Description
IsLatestVersion	String	true	Indicates whether the kernel version is the latest version. Valid values: true false

Parameter	Type	Example	Description
DBVersion	String	8.0	The major version of the database engine. Valid values: 8.0 5.7 5.6
DBRevisionVersion	String	8.0.1.1.7	The patch version of the database engine.  Note For a cluster of the ApsaraDB PolarDB MySQL-compatible edition V5.6, the <code>DBRevisionVersion</code> parameter returns the patch version information only if the patch version is released later than August 31, 2020. Otherwise, this parameter returns an empty value. For more information about the kernel version of a cluster that runs the ApsaraDB PolarDB MySQL-compatible edition, see Release notes for the PolarDB kernel.
RequestId	String	47921222-0D37-4133-8C0D-017DC3*****	The ID of the request.
DBVersionStatus	String	Stable	The status of the minor version. Valid values: Stable: The minor version is stable. Old: The minor version is outdated. We recommend that you upgrade the cluster to the latest version. HighRisk: The minor version has critical defects. We recommend that you immediately upgrade the cluster to the latest version.  Note For more information about how to upgrade the minor version, see Upgrade versions.
DBClusterId	String	pc-*****	The ID of the PolarDB cluster.

Parameter	Type	Example	Description
DBMinorVersion	String	8.0.1	The minor version of the database engine. - If <code>DBVersion</code> is 8.0, the following values are valid: 8.0.2 8.0.1 - If <code>DBVersion</code> is 5.7, the value of this parameter is 5.7.28. - If <code>DBVersion</code> is 5.6, the value of this parameter is 5.6.16.
ProxyRevisionVersion	String	2.4.15	The version of the database proxy.
ProxyVersionStatus	String	Stable	The status of the proxy version. Valid values: Stable: The proxy version is stable. Old: The proxy version is outdated. We recommend that you upgrade the cluster to the latest version. HighRisk: The proxy version has critical defects. We recommend that you immediately upgrade the cluster to the latest version.  Note For more information about how to upgrade the proxy version, see Upgrade versions.
ProxyLatestVersion	String	2.4.17	The latest version of the database proxy.
DBLatestVersion	String	8.0.1.1.16	The latest version of the database engine.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeDBClusterVersion
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

`XML` format

```

HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDBClusterVersionResponse>
  <IsLatestVersion>true</IsLatestVersion>
  <DBVersion>8.0</DBVersion>
  <DBRevisionVersion>8.0.1.1.7</DBRevisionVersion>
  <RequestId>47921222-0D37-4133-8C0D-017DC3*****</RequestId>
  <DBVersionStatus>Stable</DBVersionStatus>
  <DBClusterId>pc-*****</DBClusterId>
  <DBMinorVersion>8.0.1</DBMinorVersion>
  <ProxyRevisionVersion>2.4.15</ProxyRevisionVersion>
  <ProxyVersionStatus>Stable</ProxyVersionStatus>
  <ProxyLatestVersion>2.4.17</ProxyLatestVersion>
  <DBLatestVersion>8.0.1.1.16</DBLatestVersion>
</DescribeDBClusterVersionResponse>

```

JSON **format**

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "IsLatestVersion" : "true",
  "DBVersion" : "8.0",
  "DBRevisionVersion" : "8.0.1.1.7",
  "RequestId" : "47921222-0D37-4133-8C0D-017DC3*****",
  "DBVersionStatus" : "Stable",
  "DBClusterId" : "pc-*****",
  "DBMinorVersion" : "8.0.1",
  "ProxyRevisionVersion" : "2.4.15",
  "ProxyVersionStatus" : "Stable",
  "ProxyLatestVersion" : "2.4.17",
  "DBLatestVersion" : "8.0.1.1.16"
}

```

Error codes

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

9.2. UpgradeDBClusterVersion

Updates the kernel version of an ApsaraDB PolarDB MySQL-compatible edition cluster.

Note

- You can update the kernel version of an ApsaraDB PolarDB MySQL-compatible edition cluster only to a revision version. For example, you can update the kernel version of a cluster from V8.0.1.1.3 to V8.0.1.1.4.
- You must use the credentials of your Alibaba Cloud account to update the kernel version of an ApsaraDB PolarDB MySQL-compatible edition cluster. RAM users are not authorized to create scheduled tasks that are used to update kernel versions for ApsaraDB PolarDB MySQL-compatible edition clusters.

Debugging

Alibaba Cloud provides OpenAPI Explorer to simplify API usage. 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	UpgradeDBClusterVersion	The operation that you want to perform. Set the value to UpgradeDBClusterVersion .
DBClusterId	String	Yes	pc-*****	The ID of the ApsaraDB PolarDB MySQL-compatible edition cluster.  Note You can call the DescribeDBClusters operation to query the information about each cluster that belongs to your Alibaba Cloud account. The returned information includes the ID of each cluster.

Parameter	Type	Required	Example	Description
PlannedStartTime	String	No	2021-01-14T09:00:00Z	The earliest start time to run the task to update the kernel version of the specified cluster. The task runs within a specified period of time. The value of this parameter must be in the <code>YYYY-MM-DDThh:mm:ssZ</code> UTC format.  Note - The earliest start time of the task can be a point in time within the next 24 hours. For example, if the current time is <code>2021-01-14T09:00:00Z</code>, you can specify a point in the time range from <code>2021-01-14T09:00:00Z</code> to <code>2021-01-15T09:00:00Z</code>. - If you do not specify this parameter, the kernel upgrading task runs immediately after the request is submitted.
				The latest start time to run the task. The value of this parameter must be in the <code>YYYY-MM-DDThh:mm:ssZ</code> UTC format.

Parameter	Type	Required	Example	Description
PlannedEndTime	String	No	2021-01-14T09:30:00Z	Note - The value of this parameter must be at least 30 minutes later than the value of the PlannedStartTime parameter. - If you specify the PlannedStartTime parameter but do not specify a value for the PlannedEndTime parameter, the latest start time of the task is set to a value that is calculated by the value of the PlannedEndTime parameter + 30 minutes by default. For example, if you set the PlannedStartTime parameter to 2021-01-14T09:00:00Z and you do not specify the PlannedEndTime parameter, the latest start time of the task is set to 2021-01-14T09:30:00Z.
FromTimeService	Boolean	No	false	A hidden parameter. You do not need to specify this parameter.

Parameter	Type	Required	Example	Description
UpgradeType	String	No	PROXY	The update type. Valid values: • PROXY: specifies to update the database proxy • DB: specifies to update the kernel version • ALL: specifies to update both the database proxy and the kernel version

Response parameters

Parameter	Type	Example	Description
RequestId	String	CAE6755F-B79A-4861-B227-801FE8*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=UpgradeDBClusterVersion
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<UpgradeDBClusterVersionResponse>
<RequestId>CAE6755F-B79A-4861-B227-801FE8*****</RequestId>
</UpgradeDBClusterVersionResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "CAE6755F-B79A-4861-B227-801FE8*****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	ScheduleTaskExist	The specified dbCluster already has a scheduled task.	The error code returned because a different task is scheduled to run on the specified cluster.

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

10.Data Security

10.1. Whitelist management

10.1.1. ModifyDBClusterAccessWhitelist

Creates or modifies the whitelists for a PolarDB cluster. The whitelists include IP address whitelists and security groups.

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	No	ModifyDBClusterAccessWhitelist	The operation that you want to perform. Set the value to ModifyDBClusterAccessWhitelist .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
WhiteListType	String	No	IP	The type of the whitelist. Valid values: IP: IP whitelist group SecurityGroup: security group Default value: IP .

Parameter	Type	Required	Example	Description
DBClusterIPArrayName	String	No	default	The name of the IP whitelist group. The group name must be 2 to 120 characters in length and consists of lowercase letters and digits. It must start with a letter, and end with a letter or a digit. - If the specified whitelist group name does not exist, the whitelist group is created. - If the specified whitelist group name exists, the whitelist group is modified. - If you do not specify this parameter, the default group is modified.  Note - You can create a maximum of 50 IP whitelist groups for a cluster. - This parameter can be specified only when the WhiteListType parameter is set to IP.
DBClusterIPArrayAttribute	String	No	hidden	The attribute of the IP whitelist group. Set this parameter to hidden to hide the IP whitelist group in the console.  Note - The IP whitelist group that has appeared in the console cannot be hidden. - This parameter can be specified only when the WhiteListType parameter is set to IP.

Parameter	Type	Required	Example	Description
SecurityIps	String	No	10.23.12.24	The IP addresses or Classless Inter-Domain Routing (CIDR) blocks in the IP whitelist group. You can add 1,000 IP addresses or CIDR blocks to all the IP whitelist groups. Separate multiple IP addresses with commas (.). The following two formats are supported: - IP addresses. Example: 10.23.12.24. - CIDR blocks. Example: 10.23.12.24/24. 24 indicates the length of the prefix of the CIDR block. The length is the range of 1 to 32.  Note This parameter can be specified only when the WhiteListType parameter is set to IP.
ModifyMode	String	No	Cover	The method for modifying the IP whitelist. Valid values: Cover: overwrites the original IP whitelist. This value is the default value. Append: adds the IP address. Delete: deletes the IP address.  Note This parameter can be specified only when the WhiteListType parameter is set to IP.

Parameter	Type	Required	Example	Description
SecurityGroupIds	String	No	sg-*****	The ID of the security group. Separate multiple security groups with commas (,).  Note - You can add a maximum of three security groups to a cluster. - This parameter can be specified only when the WhiteListType parameter is set to SecurityGroup.

Response parameters

Parameter	Type	Example	Description
RequestId	String	D0CEC6AC-7760-409A-A0D5-E6CD86*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=ModifyDBClusterAccessWhitelist
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDBClusterAccessWhitelistResponse>
  <RequestId>D0CEC6AC-7760-409A-A0D5-E6CD86*****</RequestId>
</ModifyDBClusterAccessWhitelistResponse>
```

JSON format

```
{
  "RequestId": "D0CEC6AC-7760-409A-A0D5-E6CD86*****"
}
```

Error codes

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

10.1.2. DescribeDBClusterAccessWhitelist

Queries the IP address whitelists and security groups of a specified database cluster.

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	No	DescribeDBClusterAccessWhitelist	The operation that you want to perform. Set the value to DescribeDBClusterAccessWhitelist .
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster.

Response parameters

Parameter	Type	Example	Description
DBClusterSecurityGroups	Array of DBClusterSecurityGroup		The Elastic Compute Service (ECS) security groups that are associated with the cluster.
DBClusterSecurityGroup			
SecurityGroupId	String	sg-bp*****	The ID of the ECS security group.
SecurityGroupName	String	vpc-*****	The name of the ECS security group.
Items	Array of DBClusterIPArray		The list of IP address whitelists for the cluster.
DBClusterIPArray			
DBClusterIPArrayAttribute	String	hidden	The attributes of the IP address whitelist.
DBClusterIPArrayName	String	default	The name of the IP address whitelist.

Parameter	Type	Example	Description
SecurityIps	String	11.***.***.***,11.***.* **.*	The IP addresses in the whitelist. Each whitelist can contain a maximum of 1,000 IP addresses. Multiple IP addresses are separated with commas (.). The following two formats are supported: - IP addresses, such as 10.xx.xx.24. - CIDR blocks, such as 10.xx.xx.24/24. In this example value, the second 24 indicates that the prefix of the CIDR block is 24-bit long. You can replace the second 24 with a value that ranges from 1 to 32.
RequestId	String	559E91A2-CDA3-4E9F-808B-29D738*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeDBClusterAccessWhitelist
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDBClusterAccessWhitelistResponse>
  <RequestId>559E91A2-CDA3-4E9F-808B-29D738*****</RequestId>
  <Items>
    <DBClusterIPArray>
      <SecurityIps>127.0.0.1</SecurityIps>
      <DBClusterIPArrayName>default</DBClusterIPArrayName>
      <DBClusterIPArrayAttribute></DBClusterIPArrayAttribute>
    </DBClusterIPArray>
    <DBClusterIPArray>
      <SecurityIps>11.***.***.***</SecurityIps>
      <DBClusterIPArrayName>test</DBClusterIPArrayName>
      <DBClusterIPArrayAttribute>hidden</DBClusterIPArrayAttribute>
    </DBClusterIPArray>
  </Items>
  <DBClusterSecurityGroups>
    <DBClusterSecurityGroup>
      <SecurityGroupName>vpc-*****</SecurityGroupName>
      <SecurityGroupId>sg-*****</SecurityGroupId>
    </DBClusterSecurityGroup>
  </DBClusterSecurityGroups>
</DescribeDBClusterAccessWhitelistResponse>
```


JSON format

```
{
  "RequestId": "559E91A2-CDA3-4E9F-808B-29D738*****",
  "Items": {
    "DBClusterIPArray": [
      {
        "SecurityIps": "127.0.0.1",
        "DBClusterIPArrayName": "default",
        "DBClusterIPArrayAttribute": ""
      },
      {
        "SecurityIps": "11.***.***.***,11.***.***.***",
        "DBClusterIPArrayName": "test",
        "DBClusterIPArrayAttribute": "hidden"
      }
    ],
    "DBClusterSecurityGroups": {
      "DBClusterSecurityGroup": [
        {
          "SecurityGroupName": "vpc-*****",
          "SecurityGroupId": "sg-*****"
        }
      ]
    }
  }
}
```

Error codes

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

10.2. SSL encryption

10.2.1. DescribeDBClusterSSL

Queries the Secure Sockets Layer (SSL) settings of a PolarDB cluster.

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	DescribeDBClusterSSL	The operation that you want to perform. Set the value to DescribeDBClusterSSL .

Parameter	Type	Required	Example	Description
DBClusterId	String	Yes	pc-*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query the details of the clusters that belong to your Alibaba Cloud account, such as cluster IDs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C890995A-CF06-4F4D-8DB8-DD26C2*****	The ID of the request.
SSLAutoRotate	String	Enable	Indicates whether automatic rotation of SSL certificates is enabled. Valid values: Enable Disable  Note This parameter is valid only for PolarDB for MySQL clusters.
Items	Array of Item		The list of SSL connections.
SSLExpireTime	String	2021-11-13T07:14:22Z	The time when the server certificate expires. The time is in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time is displayed in UTC.
SSLEnabled	String	Enabled	Indicates whether SSL encryption is enabled. Valid values: Enabled: TDE is enabled. Disable: TDE is disabled.
SSLConnectionString	String	pc-*****.mysql.polardb.rds.aliyuncs.com	The SSL connection string.
DBEndpointId	String	pe-*****	The ID of the cluster endpoint.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeDBClusterSSL
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDBClusterSSLResponse>
  <RequestId>C890995A-CF06-4F4D-8DB8-DD26C2*****</RequestId>
  <SSLAutoRotate>Enable</SSLAutoRotate>
  <Items>
    <SSLExpireTime>2021-11-13T07:14:22Z</SSLExpireTime>
    <SSLEnabled>Enabled</SSLEnabled>
    <SSLConnectionString>pc-*****.mysql.polardb.rds.aliyuncs.com</SSLConnectionS
tring>
    <DBEndpointId>pe-*****</DBEndpointId>
  </Items>
</DescribeDBClusterSSLResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "C890995A-CF06-4F4D-8DB8-DD26C2*****",
  "SSLAutoRotate" : "Enable",
  "Items" : [ {
    "SSLExpireTime" : "2021-11-13T07:14:22Z",
    "SSLEnabled" : "Enabled",
    "SSLConnectionString" : "pc-*****.mysql.polardb.rds.aliyuncs.com",
    "DBEndpointId" : "pe-*****"
  } ]
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDBCluster.NotFound	The DBClusterId provided does not exist in our records.	The error message returned because the specified DBClusterId does not exist in the current record.

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

10.2.2. ModifyDBClusterSSL

Enables or disables Security Socket Layer (SSL) encryption or updates the SSL certificate issued by Certificate Authorities (CA) for a PolarDB cluster.

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	No	ModifyDBClusterSSL	The operation that you want to perform. Set the value to ModifyDBClusterSSL .
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster that you want to manage.
SSLEnabled	String	No	Enable	Specifies how to modify the SSL encryption status. Valid values: • Disable: SSL encryption is disabled. • Enable: SSL encryption is enabled. • Update: The SSL certificate is updated.  Note After you enable SSL encryption or update the SSL certificate, you must download and configure the certificate. For more information, see Configure SSL encryption.

Parameter	Type	Required	Example	Description
DBEndpointId	String	No	pe- *****	The ID of the endpoint.  Note - This parameter is required for a PolarDB for MySQL cluster. - This parameter is not required for a PolarDB for PostgreSQL cluster or a PolarDB for Oracle cluster. By default, SSL encryption is enabled for all endpoints. - You can call the DescribeDBClusterSSL operation to view the details of the endpoint.
NetType	String	No	Public	The network type supported by the endpoint that is specified by DBEndpointId. Valid values: Public: Internet Private: virtual private cloud (VPC) Inner: the classic network  Note - This parameter is required for a PolarDB for MySQL cluster. - This parameter is not required for a PolarDB for PostgreSQL cluster or a PolarDB for Oracle cluster. By default, SSL encryption is enabled for all endpoints.

Parameter	Type	Required	Example	Description
SSLAutoRotate	String	No	Enable	Specifies whether automatic rotation of SSL certificates is enabled. • Enable: Automatic rotation of SSL certificates is enabled. • Disable: Automatic rotation of SSL certificates is disabled.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A94B1755-6D8B-4E27-BF3C-8562BC*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=ModifyDBClusterSSL
&DBClusterId=pc-*****
&SSLEnabled=Enable
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyDBClusterSSLResponse>
<RequestId>A94B1755-6D8B-4E27-BF3C-8562BC*****</RequestId>
</ModifyDBClusterSSLResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "A94B1755-6D8B-4E27-BF3C-8562BC*****"
}
```

Error codes

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

10.3. TDE

10.3.1. DescribeDBClusterTDE

Queries the Transparent Data Encryption (TDE) settings of a ApsaraDB PolarDB MySQL-compatible edition cluster.

 **Note** Only ApsaraDB PolarDB MySQL-compatible edition 8.0 clusters support TDE.

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	No	DescribeDBClusterTDE	The operation that you want to perform. Set the value to DescribeDBClusterTDE .
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster.

Response parameters

Parameter	Type	Example	Description
TDEStatus	String	Enabled	Specifies whether TDE encryption is enabled. Valid values: Enabled: TDE encryption is enabled. Disabled: TDE encryption is disabled.
RequestId	String	E37D1508-EC3B-4E06-A24A-C7AC31*****	The ID of the request.
DBClusterId	String	pc-*****	The ID of the PolarDB cluster.
EncryptionKey	String	2a4f4ac2-****-****-****-*****	The ID of the custom encryption key.

Parameter	Type	Example	Description
EncryptNewTables	String	ON	Specifies whether automatic encryption is enabled for new tables. Valid values: ON: Automatic encryption is enabled for new tables. OFF: Automatic encryption is disabled for new tables.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeDBClusterTDE
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDBClusterTDEResponse>
  <TDEStatus>Enabled</TDEStatus>
  <RequestId>E37D1508-EC3B-4E06-A24A-C7AC31*****</RequestId>
  <DBClusterId>pc-*****</DBClusterId>
  <EncryptionKey>2a4f4ac2-****-****-****-*****</EncryptionKey>
  <EncryptNewTables>ON</EncryptNewTables>
</DescribeDBClusterTDEResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TDEStatus" : "Enabled",
  "RequestId" : "E37D1508-EC3B-4E06-A24A-C7AC31*****",
  "DBClusterId" : "pc-*****",
  "EncryptionKey" : "2a4f4ac2-****-****-****-*****",
  "EncryptNewTables" : "ON"
}
```

Error codes

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

10.3.2. ModifyDBClusterTDE

Enables Transparent Data Encryption (TDE) or modifies the TDE settings of a ApsaraDB PolarDB MySQL-compatible edition cluster.

 Note

- Only ApsaraDB PolarDB MySQL-compatible edition 8.0 clusters support TDE.
- After TDE is enabled, you cannot disable TDE.

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	No	ModifyDBClusterTDE	The operation that you want to perform. Set the value to ModifyDBClusterTDE .
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster that you want to manage.
TDEStatus	String	Yes	Enable	Modifies the TDE status. The value is set to Enable .
RoleArn	String	No	acs:ram::1406926****:role/aliyunrdsinstanceencryptiondefaultrole	The Alibaba Cloud Resource Name (ARN) of the role. An ARN is the global resource identifier of a role. For more information, see RAM role overview .
EncryptionKey	String	No	749c1df7-****-****-****-*****	The ID of the custom encryption key.
EncryptNewTables	String	No	ON	Specifies whether automatic encryption is enabled for new tables. Valid values: • ON: Automatic encryption is enabled for new tables. • OFF: Automatic encryption is disabled for new tables.

Response parameters

Parameter	Type	Example	Description
RequestId	String	5F859238-2A36-4A8D-BD0F-732112*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=ModifyDBClusterTDE
&DBClusterId=pc-*****
&TDEStatus=Enable
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyDBClusterTDEResponse>
<requestId>5F859238-2A36-4A8D-BD0F-732112*****</requestId>
</ModifyDBClusterTDEResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "requestId" : "5F859238-2A36-4A8D-BD0F-732112*****"
}
```

Error codes

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

11. Node management

11.1. CreateDBNodes

Adds a read-only node to a PolarDB cluster.

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	CreateDBNodes	The operation that you want to perform. Set the value to CreateDBNodes .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
ClientToken	String	No	6000170000591a ed949d0f54a343f 1a4233c1e7d1c5c *****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length. The token is case-sensitive.

Parameter	Type	Required	Example	Description
EndpointBindList	String	No	pe- ***** *****	The ID of the cluster endpoint to which the new node is added. If you need to add the node to multiple endpoints at a time, separate multiple endpoint IDs with commas (,).  Note - You can call <code>DescribeDBClusterEndpoints</code> operation to query the details of cluster endpoints, including endpoint IDs. - You can enter the IDs of the default cluster endpoint and a custom cluster endpoint. - If this parameter is empty, the new node is added to all the cluster endpoints for which the Automatically Associate New Nodes feature is enabled by default. When the <code>AutoAddNewNodes</code> parameter is set to <code>Enable</code>, the Automatically Associate New Nodes feature is enabled.

Parameter	Type	Required	Example	Description
PlannedStartTime	String	No	2021-01-14T09:00:00Z	The earliest time when the scheduled task for adding the node starts to be run. The scheduled task indicates that the task is run in the required period. Specify the time in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time must be in UTC.  Note - The earliest start time of the task can be a point in time within the next 24 hours. For example, if the current time is <code>2021-01-14T09:00:00Z</code>, you can specify a point in the time range from <code>2021-01-14T09:00:00Z</code> to <code>2021-01-15T09:00:00Z</code>. - If this parameter is left blank, the task for adding the node is immediately run by default.

Parameter	Type	Required	Example	Description
PlannedEndTime	String	No	2021-01-14T09:30:00Z	The latest start time to run the task. Specify the time in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time must be in UTC. Note - The value of this parameter must be at least 30 minutes later than the value of the <code>PlannedStartTime</code> parameter. - If you specify the <code>PlannedStartTime</code> parameter but do not specify a value for the <code>PlannedEndTime</code> parameter, the latest start time of the task is set to a value that is calculated by the value of the <code>PlannedStartTime</code> parameter + 30 minutes by default. For example, if you set the <code>PlannedStartTime</code> parameter to <code>2021-01-14T09:00:00Z</code> and you do not specify the <code>PlannedEndTime</code> parameter, the latest start time of the task is set to <code>2021-01-14T09:30:00Z</code>.
ImciSwitch	String	No	ON	Specifies whether to enable the In-Memory Column Index (IMCI) feature. Valid values: - ON - OFF

Parameter	Type	Required	Example	Description
DBNode.N.TargetClass	String	No	polar.mysql.x4.medium	The specification of the node to be added. The specification of the new node must be consistent with the specifications of the original nodes. For more information about the node specifications, see Specifications of compute nodes.  Note - You must specify at least one of the DBNode.N.ZoneId and DBNode.N.TargetClass parameters. N is an integer that starts from 1. The maximum value of N is equal to 16 minus the number of existing nodes. - You can add multiple read-only nodes to only PolarDB for MySQL clusters at a time. A PolarDB for MySQL cluster contains a maximum of 15 read-only nodes. - If databases in the cluster run the Oracle or PostgreSQL database engine, you must specify this parameter. If databases in the cluster run the MySQL database engine, you do not need to specify this parameter.

Parameter	Type	Required	Example	Description
DBNode.N.ZoneId	String	No	cn-qingdao-c	The zone ID of the node to be added, which must be the same as that of existing nodes. You can call the DescribeRegions operation to query the IDs of zones.  Note - You must specify at least one of the DBNode.N.ZoneId and DBNode.N.TargetClass parameters. N is an integer that starts from 1. The maximum value of N is equal to 16 minus the number of existing nodes. - You can add multiple read-only nodes to only PolarDB for MySQL clusters at a time. A PolarDB for MySQL cluster contains a maximum of 15 read-only nodes. - If databases in the cluster run the Oracle or PostgreSQL database engine, you must specify this parameter. If databases in the cluster run the MySQL database engine, you do not need to specify this parameter.

Response parameters

Parameter	Type	Example	Description
DBNodeIds	Array of String	pi-*****	The ID list of the database nodes that were created.
RequestId	String	E053E730-5755-4AA9-AA9D-A47867*****	The ID of the request.
DBClusterId	String	pc-*****	The ID of the cluster.
OrderId	String	2148126708*****	The ID of the order.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=CreateDBNodes
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateDBNodesResponse>
  <DBNodeIds>pi-*****</DBNodeIds>
  <RequestId>E053E730-5755-4AA9-AA9D-A47867*****</RequestId>
  <DBClusterId>pc-*****</DBClusterId>
  <OrderId>2148126708*****</OrderId>
</CreateDBNodesResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "DBNodeIds" : [ "pi-*****" ],
  "RequestId" : "E053E730-5755-4AA9-AA9D-A47867*****",
  "DBClusterId" : "pc-*****",
  "OrderId" : "2148126708*****"
}
```

Error codes

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

11.2. ModifyDBNodeClass

Changes the node specifications of a specified PolarDB cluster.

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	No	ModifyDBNodeClass	The operation that you want to perform. Set the value to ModifyDBNodeClass .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
DBNodeTargetClass	String	Yes	polar.mysql.x4.large	The specifications of all nodes. For more information, see Specifications of computing nodes .
ModifyType	String	Yes	Upgrade	The type of the configuration change. Valid values: • Upgrade • Downgrade
ClientToken	String	No	6000170000591aed949d0f54a343f1a4233c1e7d1c5c*****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length. The token is case-sensitive.

Parameter	Type	Required	Example	Description
PlannedStartTime	String	No	2021-01-14T09:00:00Z	The earliest time to upgrade the specifications within the scheduled time period. Specify the time in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time must be in UTC.  Note - This parameter takes effect only when <code>ModifyType</code> is set to <code>Upgrade</code>. - The earliest start time of the task can be a point in time within the next 24 hours. For example, if the current time is <code>2021-01-14T09:00:00Z</code>, you can specify a point in the time range from <code>2021-01-14T09:00:00Z</code> to <code>2021-01-15T09:00:00Z</code>. - If this parameter is empty, the upgrade task is immediately performed.
				The latest start time to run the task. Specify the time in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time must be in UTC.

Parameter	Type	Required	Example	Description
PlannedEndTime	String	No	2021-01-14T09:30:00Z	Note - The value of this parameter must be at least 30 minutes later than the value of the PlannedStartTime parameter. - If you specify the <code>PlannedStartTime</code> parameter but do not specify a value for the PlannedEndTime parameter, the latest start time of the task is set to a value that is calculated by the value of the PlannedEndTime parameter + 30 minutes by default. For example, if you set the <code>PlannedStartTime</code> parameter to <code>2021-01-14T09:00:00Z</code> and you do not specify the PlannedEndTime parameter, the latest start time of the task is set to <code>2021-01-14T09:30:00Z</code>.
SubCategory	String	No	normal_general	The category of the cluster. Valid values: normal_exclusive: dedicated normal_general: genera-purpose

Response parameters

Parameter	Type	Example	Description
-----------	------	---------	-------------

Parameter	Type	Example	Description
DBClusterId	String	pc-*****	The ID of the PolarDB cluster.
OrderId	String	2035629*****	The ID of the order.
RequestId	String	685F028C-4FCD-407D-A559-072D63*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=ModifyDBNodeClass
&DBClusterId=pc-*****
&DBNodeTargetClass=polar.mysql.x4.large
&ModifyType=Upgrade
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDBNodeClassResponse>
  <RequestId>685F028C-4FCD-407D-A559-072D6378C4C3</RequestId>
  <OrderId>2035629*****</OrderId>
  <DBClusterId>pc-*****</DBClusterId>
</ModifyDBNodeClassResponse>
```

JSON format

```
{
  "RequestId": "685F028C-4FCD-407D-A559-072D6378C4C3",
  "OrderId": "2035629*****",
  "DBClusterId": "pc-*****"
}
```

Error codes

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

11.3. ModifyDBNodesClass

Changes the node specifications of a specified PolarDB cluster.

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	ModifyDBNodesClass	The operation that you want to perform. Set the value to ModifyDBNodesClass .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
ModifyType	String	Yes	Upgrade	The type of the configuration change. Valid values: • Upgrade • Downgrade
ClientToken	String	No	6000170000591aed949d0f54a343f1a4233c1e7d1c5c*****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length. The token is case-sensitive.

Parameter	Type	Required	Example	Description
PlannedStartTime	String	No	2021-01-14T09:00:00Z	The earliest time to upgrade the specifications within the scheduled time period. Specify the time in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time must be in UTC.  Note - This parameter takes effect only when <code>ModifyType</code> is set to <code>Upgrade</code>. - The earliest start time of the task can be a point in time within the next 24 hours. For example, if the current time is <code>2021-01-14T09:00:00Z</code>, you can specify a point in the time range from <code>2021-01-14T09:00:00Z</code> to <code>2021-01-15T09:00:00Z</code>. - If this parameter is empty, the upgrade task is immediately performed.

Parameter	Type	Required	Example	Description
PlannedEndTime	String	No	2021-01-14T09:30:00Z	The latest time to upgrade the specifications within the scheduled time period. Specify the time in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time must be in UTC.  Note - The value of this parameter must be at least 30 minutes later than the value of the <code>PlannedStartTime</code> parameter. - If you specify the <code>PlannedStartTime</code> parameter but do not specify a value for the <code>PlannedEndTime</code> parameter, the latest start time of the task is set to a value that is calculated by the value of the <code>PlannedStartTime</code> parameter + 30 minutes by default. For example, if you set the <code>PlannedStartTime</code> parameter to <code>2021-01-14T09:00:00Z</code> and you do not specify the <code>PlannedEndTime</code> parameter, the latest start time of the task is set to <code>2021-01-14T09:30:00Z</code>.
SubCategory	String	No	normal_general	The category of the cluster. Valid values: normal_exclusive: dedicated normal_general: genera-purpose

Parameter	Type	Required	Example	Description
DBNode.N.DBNodeId	String	No	pi-*****	The ID of the cluster node. Note If you specify this parameter, DBNode.N.TargetClass is required. N is an integer that starts from 1. The maximum value of N is equal to 16 minus the number of existing nodes.
DBNode.N.TargetClass	String	No	polar.mysql.x4.medium	The modified specifications of the node. For more information, see Specifications of compute nodes. Note If you specify this parameter, DBNode.N.DBNodeId is required. N is an integer that starts from 1. The maximum value of N is equal to 16 minus the number of existing nodes.

Response parameters

Parameter	Type	Example	Description
RequestId	String	685F028C-4FCD-407D-A559-072D63*****	The ID of the request.
DBClusterId	String	pc-*****	The ID of the cluster.
OrderId	String	2035629*****	The ID of the order.

Examples

Sample requests

```

http(s)://polardb.aliyuncs.com/?Action=ModifyDBNodesClass
&DBClusterId=pc-*****
&ModifyType=Upgrade
&DBNode=[{"DBNodeId":"pi-*****", "TargetClass":"polar.mysql.x4.medium"}]
&ClientToken=6000170000591aed949d0f54a343f1a4233c1e7d1c5c*****
&PlannedStartTime=2021-01-14T09:00:00Z
&PlannedEndTime=2021-01-14T09:30:00Z
&<Common request parameters>

```

Sample responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyDBNodesClassResponse>
  <RequestId>685F028C-4FCD-407D-A559-072D63*****</RequestId>
  <DBClusterId>pc-*****</DBClusterId>
  <OrderId>2035629*****</OrderId>
</ModifyDBNodesClassResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "685F028C-4FCD-407D-A559-072D63*****",
  "DBClusterId" : "pc-*****",
  "OrderId" : "2035629*****"
}
```

Error codes

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

11.4. RestartDBNode

Restarts a node in a specified PolarDB cluster.

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	RestartDBNode	The operation that you want to perform. Set the value to RestartDBNode .

Parameter	Type	Required	Example	Description
DBNodeId	String	Yes	pi-*****	The ID of the cluster node.  Note You can call the DescribeDBClusters operation to query the details of the clusters that belong to your Alibaba Cloud account, such as cluster IDs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	D0CEC6AC-7760-409A-A0D5-E6CD86*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=RestartDBNode
&DBNodeId=pi-*****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<RestartDBNodeResponse>
<RequestId>D0CEC6AC-7760-409A-A0D5-E6CD86*****</RequestId>
</RestartDBNodeResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "D0CEC6AC-7760-409A-A0D5-E6CD86*****"
}
```

Error codes

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

11.5. DeleteDBNodes

Deletes a read-only node from a specified PolarDB cluster.

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	No	DeleteDBNodes	The operation that you want to perform. Set the value to DeleteDBNodes .
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster whose node is to be deleted.
DBNodeId.N	RepeatList	Yes	pi-*****	The ID of the node to be deleted. N is a positive integer that starts from 1. The maximum value of N is the number of current nodes minus 2. Each cluster must contain at least one primary node and one read-only node.  Note You can delete multiple read-only nodes at a time from only a ApsaraDB PolarDB MySQL-compatible edition cluster.
ClientToken	String	No	6000170000591aed949d0f54a343f1a42*****	The client token that is used to ensure the idempotence of the requests. If an API operation is idempotent, the API operation returns the same result for identical requests. You can use the client to generate the value, but you must make sure that the value is unique among different requests. The token is case-sensitive, and can contain a maximum of 64 ASCII characters in length.

Response parameters

Parameter	Type	Example	Description
DBClusterId	String	pc-*****	The ID of the PolarDB cluster.

Parameter	Type	Example	Description
OrderId	String	2035638*****	The ID of the order.
RequestId	String	6566B2E6-3157-4B57-A693-AFB751*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DeleteDBNodes
&DBClusterId=pc-*****
&DBNodeId.1=pi-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteDBNodesResponse>
  <RequestId>6566B2E6-3157-4B57-A693-AFB751*****</RequestId>
  <OrderId>2035638*****</OrderId>
  <DBClusterId>pc-*****</DBClusterId>
</DeleteDBNodesResponse>
```

JSON format

```
{
  "RequestId": "6566B2E6-3157-4B57-A693-AFB751*****",
  "OrderId": "2035638*****",
  "DBClusterId": "pc-*****"
}
```

Error codes

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

12.Cluster parameters

12.1. CreateParameterGroup

Creates a parameter template.

You can use parameter templates to manage multiple parameters at a time and apply existing parameters to a PolarDB cluster. For more information, see [Use a parameter template](#).

 **Note** Only ApsaraDB PolarDB MySQL-compatible edition clusters support this feature.

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	No	CreateParameterGroup	The operation that you want to perform. Set the value to CreateParameterGroup .
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the parameter template belongs.  Note You can call the DescribeRegions operation to query the IDs of available regions.
DBType	String	Yes	MySQL	The type of the database engine. Only MySQL is supported.
DBVersion	String	Yes	8.0	The version number of the database engine. Valid values: • 5.6 • 5.7 • 8.0

Parameter	Type	Required	Example	Description
ParameterGroupName	String	Yes	test_group	The name of the parameter template. The name must meet the following requirements: - It can contain letters, digits, and underscores (_). It must start with a letter and cannot contain Chinese characters. - It must be 8 to 64 characters in length.
ParameterGroupDesc	String	No	test_group	The description of the parameter template. It must be 0 to 200 characters in length.
Parameters	String	Yes	<pre>{"wait_timeout": "86400", "innodb_old_blocks_time": "1000"}</pre>	The JSON string that consists of parameters and values. The parameter values are strings. Example: <pre>{"wait_timeout": "86400", "innodb_old_blocks_time": "1000"}</pre>  Note You can call the DescribeParameterTemplates operation to query the details of all parameters in the cluster of a specified engine version, such as the parameter names and valid values.

Response parameters

Parameter	Type	Example	Description
RequestId	String	514D1D87-E243-4A5F-A87D-2785C3*****	The ID of the request.
ParameterGroupid	String	pcpg-*****	The ID of the parameter template.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=CreateParameterGroup
&DBType=MySQL
&DBVersion=8.0
&ParameterGroupName=test_group
&Parameters={"wait_timeout":"86400","innodb_old_blocks_time":"1000"}
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateParameterGroupResponse>
  <RequestId>514D1D87-E243-4A5F-A87D-2785C3*****</RequestId>
  <ParameterGroupId>pcpg-*****</ParameterGroupId>
</CreateParameterGroupResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "514D1D87-E243-4A5F-A87D-2785C3*****",
  "ParameterGroupId" : "pcpg-*****"
}
```

Error codes

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

12.2. DescribeDBClusterParameters

Queries the parameters of a specified PolarDB cluster.

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	DescribeDBClusterParameters	The operation that you want to perform. Set the value to DescribeDBClusterParameters .

Parameter	Type	Required	Example	Description
DBClusterId	String	Yes	pc-*****	The ID of the cluster.

Response parameters

Parameter	Type	Example	Description
RunningParameters	Array of Parameter		The parameters that are in use.
Parameter			
CheckingCode	String	[utf8 latin1 gbk utf8mb4]	The valid values of the parameter.
DataType	String	INT	The data type of the parameter value. Valid values: - INT - STRING - B
ParameterName	String	character_set_server	The name of the parameter.
ParameterValue	String	utf8	The value of the parameter.
ForceRestart	Boolean	true	Indicates whether a cluster restart is required to make the parameter modification take effect. Valid values: - False - True
ParameterDescription	String	The server's default character set.	The description of the parameter.
ParameterStatus	String	Normal	The status of the parameter. Valid values: - normal - modifying
DefaultParameterValue	String	utf8	The default value of the parameter.

Parameter	Type	Example	Description
IsModifiable	Boolean	true	Indicates whether the parameter setting can be modified. Valid values: • False • True
IsNodeAvailable	String	0	Indicates whether the parameter is a global parameter. Valid values: • 0: yes. The modified parameter value is synchronized to other nodes by default. • 1: no. You can customize the nodes the modified parameter value can be synchronized to.
ParamRelyRule	String	utf8	The parameter dependencies.
DBVersion	String	5.6	The version of the database engine • Valid values for the MySQL database engine: ◦ 5.6 ◦ 5.7 ◦ 8.0 • Valid value for the PostgreSQL database engine: 11 • Valid value for the Oracle database engine: 11
RequestId	String	EBEAA83D-1734-42E3-85E3-E25F6E*****	The ID of the request.
DBType	String	MySQL	The database engine that the cluster runs. Valid values: • MySQL • PostgreSQL • Oracle
Engine	String	POLARDB	The cluster engine.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeDBClusterParameters
&ResourceOwnerId=1
&DBClusterId=pc-*****
&Common request parameters
```

Sample responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDBClusterParametersResponse>
  <RunningParameters>
    <CheckingCode>[utf8|latin1|gbk|utf8mb4]</CheckingCode>
    <DataType>INT</DataType>
    <ParameterName>character_set_server</ParameterName>
    <ParameterValue>utf8</ParameterValue>
    <ForceRestart>true</ForceRestart>
    <ParameterDescription>The server's default character set.</ParameterDescription>
    <ParameterStatus>Normal</ParameterStatus>
    <DefaultParameterValue>utf8</DefaultParameterValue>
    <IsModifiable>true</IsModifiable>
    <IsNodeAvailable>0</IsNodeAvailable>
    <ParamRelyRule>utf8</ParamRelyRule>
  </RunningParameters>
  <DBVersion>5.6</DBVersion>
  <RequestId>EBEAA83D-1734-42E3-85E3-E25F6E*****</RequestId>
  <DBType>MySQL</DBType>
  <Engine>POLARDB</Engine>
</DescribeDBClusterParametersResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RunningParameters" : [ {
    "CheckingCode" : "[utf8|latin1|gbk|utf8mb4]",
    "DataType" : "INT",
    "ParameterName" : "character_set_server",
    "ParameterValue" : "utf8",
    "ForceRestart" : true,
    "ParameterDescription" : "The server's default character set.",
    "ParameterStatus" : "Normal",
    "DefaultParameterValue" : "utf8",
    "IsModifiable" : true,
    "IsNodeAvailable" : "0",
    "ParamRelyRule" : "utf8"
  } ],
  "DBVersion" : "5.6",
  "RequestId" : "EBEAA83D-1734-42E3-85E3-E25F6E*****",
  "DBType" : "MySQL",
  "Engine" : "POLARDB"
}
```

Error codes

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

12.3. DescribeDBNodesParameters

Queries the parameters of a specified node in a cluster.

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	DescribeDBNodesParameters	The operation that you want to perform. Set the value to DescribeDBNodesParameters .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
DBNodeIds	String	Yes	pi-***** ,pi-*****	The ID of the node. You can specify multiple node IDs. Separate multiple node IDs with commas (,).

Response parameters

Parameter	Type	Example	Description
DBVersion	String	5.6	The version of the MySQL engine. Valid values: 5.6 5.7 8.0
RequestId	String	9B7BFB11-C077-4FE3-B051-F69CEB*****	The ID of the request.
DBType	String	MySQL	The database engine that the cluster runs. Set the value to MySQL .
Engine	String	POLARDB	The cluster engine.
DBNodeIds	Array of DBNodeParameter		The IDs of nodes to which the node belong.
DBNodeId	String	pi-bp1r4qe3s534*****	The ID of the node.
RunningParameters	Array of Parameter		The running parameters of the current node.
CheckingCode	String	[utf8 latin1 gbk utf8mb4]	The valid values of the parameter.
DataType	String	INT	The data type of the parameter value. Valid values: - INT - STRING - B
DefaultParameterValue	String	utf8	The default value of the parameter.
ForceRestart	Boolean	true	Indicates whether a cluster restart is required to make the parameter modification take effect. Valid values: - false: no - true: yes

Parameter	Type	Example	Description
IsModifiable	Boolean	true	Indicates whether the parameter setting can be modified. Valid values: • false • true
ParameterDescription	String	The server's default character set.	The description of the parameter.
ParameterName	String	character_set_server	The name of the parameter.
ParameterStatus	String	normal	The status of the parameter. Valid values: • normal • modifying
ParameterValue	String	utf8	The value of the parameter.
IsNodeAvailable	String	1	Indicates whether the parameter is a global parameter. Valid values: • 0: yes. The modified parameter value is synchronized to other nodes by default. • 1: no. You can customize the nodes the modified parameter value can be synchronized to.
ParamRelyRule	String	utf8	The parameter dependencies.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeDBNodesParameters
&DBClusterId=pc-*****
&DBNodeIds=pi-*****,pi-*****
&Common request parameters
```

Sample responses

`XML` format

```

HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDBNodesParametersResponse>
  <DBVersion>5.6</DBVersion>
  <RequestId>9B7BFB11-C077-4FE3-B051-F69CEB*****</RequestId>
  <DBType>MySQL</DBType>
  <Engine>POLARDB</Engine>
  <DBNodeIds>
    <DBNodeId>pi-bplr4qe3s534*****</DBNodeId>
    <RunningParameters>
      <CheckingCode>[utf8|latin1|gbk|utf8mb4]</CheckingCode>
      <DataType>INT</DataType>
      <DefaultParameterValue>utf8</DefaultParameterValue>
      <ForceRestart>true</ForceRestart>
      <IsModifiable>true</IsModifiable>
      <ParameterDescription>The server's default character set.</ParameterDescription>
    >
      <ParameterName>character_set_server</ParameterName>
      <ParameterStatus>normal</ParameterStatus>
      <ParameterValue>utf8</ParameterValue>
      <IsNodeAvailable>1</IsNodeAvailable>
      <ParamRelyRule>utf8</ParamRelyRule>
    </RunningParameters>
  </DBNodeIds>
</DescribeDBNodesParametersResponse>

```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "DBVersion" : "5.6",
  "RequestId" : "9B7BFB11-C077-4FE3-B051-F69CEB*****",
  "DBType" : "MySQL",
  "Engine" : "POLARDB",
  "DBNodeIds" : [ {
    "DBNodeId" : "pi-bplr4qe3s534*****",
    "RunningParameters" : [ {
      "CheckingCode" : "[utf8|latin1|gbk|utf8mb4]",
      "DataType" : "INT",
      "DefaultParameterValue" : "utf8",
      "ForceRestart" : true,
      "IsModifiable" : true,
      "ParameterDescription" : "The server's default character set.",
      "ParameterName" : "character_set_server",
      "ParameterStatus" : "normal",
      "ParameterValue" : "utf8",
      "IsNodeAvailable" : "1",
      "ParamRelyRule" : "utf8"
    } ]
  } ]
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDBCluster.NotFound	The specified DBClusterId is not found.	The error message returned because the specified cluster instance ID does not exist.

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

12.4. DescribeParameterTemplates

Queries parameter templates of a specified PolarDB cluster.

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	DescribeParameterTemplates	The operation that you want to perform. Set the value to DescribeParameterTemplates .
DBType	String	Yes	MySQL	The type of the database engine. Only MySQL is supported.
DBVersion	String	Yes	5.7	The version of the database. Valid values: 5.6 5.7 8.0
RegionId	String	Yes	cn-hangzhou	The region ID of the cluster.  Note You can call the DescribeRegions operation to query all regions that are available within your account, such as the region ID.

Response parameters

Parameter	Type	Example	Description
ParameterCount	String	183	The number of parameters in the parameter template.
DBVersion	String	5.7	The version of the database engine.
Parameters	Array of TemplateRecord		Details about parameters.
TemplateRecord			
CheckingCode	String	[ROW STATEMENT MIXED]	The valid values of the parameter.
ParameterName	String	binlog_format	The name of the parameter.
ParameterValue	String	ROW	The default value of the parameter.
ForceModify	String	true	Indicates whether the parameter setting can be modified. Valid values: • true • false
ForceRestart	String	false	Indicates whether a cluster restart is required to make the parameter modification take effect. Valid values: • true • false
ParameterDescription	String	What form of binary logging the master will use.	The description of the parameter.
IsNodeAvailable	String	1	Indicates whether the parameter is a global parameter. Valid values: • 0: yes. The modified parameter value is synchronized to other nodes by default. • 1: no. You can customize the nodes the modified parameter value can be synchronized to.

Parameter	Type	Example	Description
ParamRelyRule	String	utf8	The parameter dependencies.
RequestId	String	D963934D-8605-4473-8EAC-54C719*****	The ID of the request.
DBType	String	MySQL	The type of the database engine.
Engine	String	POLARDB	The database engine that the cluster runs.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeParameterTemplates
&DBType=MySQL
&DBVersion=5.7
&RegionId=cn-hangzhou
&Common request parameters
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeParameterTemplatesResponse>
  <ParameterCount>183</ParameterCount>
  <DBVersion>5.7</DBVersion>
  <Parameters>
    <CheckingCode>[ROW|STATEMENT|MIXED]</CheckingCode>
    <ParameterName>binlog_format</ParameterName>
    <ParameterValue>ROW</ParameterValue>
    <ForceModify>true</ForceModify>
    <ForceRestart>false</ForceRestart>
    <ParameterDescription>What form of binary logging the master will use.</ParameterDescription>
    <IsNodeAvailable>1</IsNodeAvailable>
    <ParamRelyRule>utf8</ParamRelyRule>
  </Parameters>
  <RequestId>D963934D-8605-4473-8EAC-54C719*****</RequestId>
  <DBType>MySQL</DBType>
  <Engine>POLARDB</Engine>
</DescribeParameterTemplatesResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "ParameterCount" : "183",
  "DBVersion" : "5.7",
  "Parameters" : [ {
    "CheckingCode" : "[ROW|STATEMENT|MIXED]",
    "ParameterName" : "binlog_format",
    "ParameterValue" : "ROW",
    "ForceModify" : "true",
    "ForceRestart" : "false",
    "ParameterDescription" : "What form of binary logging the master will use.",
    "IsNodeAvailable" : "1",
    "ParamRelyRule" : "utf8"
  } ],
  "RequestId" : "D963934D-8605-4473-8EAC-54C719*****",
  "DBType" : "MySQL",
  "Engine" : "POLARDB"
}
```

Error codes

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

12.5. DescribeParameterGroups

Queries parameter templates that are available in a specified region.

You can use parameter templates to manage multiple parameters at a time and quickly apply existing parameters to a PolarDB cluster.

 **Note** Only ApsaraDB PolarDB MySQL-compatible edition clusters support this feature.

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	No	DescribeParameterGroups	The operation that you want to perform. Set the value to DescribeParameterGroups .

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region.  Note You can call the DescribeRegions operation to query all regions that are available within your account, such as the region ID.
DBType	String	No	MySQL	The type of the database engine. Only MySQL is supported.
DBVersion	String	No	8.0	The version number of the database engine. Valid values: 5.6 5.7 8.0

Response parameters

Parameter	Type	Example	Description
ParameterGroups	Array of ParameterGroups		The details of parameter templates.
CreateTime	String	2021-03-10T08:40:39Z	The time when the parameter template was created. The time follows the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time is displayed in UTC.
DBType	String	MySQL	The type of the database engine.
DBVersion	String	8.0	The version number of the database engine. Valid values:
ForceRestart	String	1	Indicates whether to restart the cluster when this parameter template is applied. Valid values: 0: A restart is not required. 1: A restart is required.

Parameter	Type	Example	Description
ParameterCounts	Long	2	The number of parameters in the parameter template.
ParameterGroupDesc	String	testgroup	The description of the parameter template.
ParameterGroupId	String	pcpg-*****	The ID of the parameter template.
ParameterGroupName	String	test	The name of the parameter template.
ParameterGroupType	String	1	The type of the parameter template. Valid values: • 0: the default parameter template. • 1: a custom parameter template. • 2: an automatic backup parameter template. After you apply this type of template, the system automatically backs up the original parameter settings of the cluster and saves the backup as a template.
RequestId	String	944CED46-A6F7-40C6-B6DC-C6E5CC*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeParameterGroups
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeParameterGroupsResponse>
  <ParameterGroups>
    <DBVersion>8.0</DBVersion>
    <ParameterGroupId>pcpg-*****</ParameterGroupId>
    <ForceRestart>1</ForceRestart>
    <ParameterGroupName>test</ParameterGroupName>
    <CreateTime>2021-03-10T08:40:39Z</CreateTime>
    <ParameterGroupDesc>testgroup</ParameterGroupDesc>
    <ParameterGroupType>1</ParameterGroupType>
    <ParameterCounts>2</ParameterCounts>
    <DBType>MySQL</DBType>
  </ParameterGroups>
  <RequestId>6F1574BE-9913-4C4C-99A9-0A42F3*****</RequestId>
</DescribeParameterGroupsResponse>
```

JSON format

```
{
  "ParameterGroups": [
    {
      "DBVersion": "8.0",
      "ParameterGroupId": "pcpg-*****",
      "ForceRestart": "1",
      "ParameterGroupName": "test",
      "CreateTime": "2021-03-10T08:40:39Z",
      "ParameterGroupDesc": "testgroup",
      "ParameterGroupType": 1,
      "ParameterCounts": 2,
      "DBType": "MySQL"
    }
  ],
  "RequestId": "6F1574BE-9913-4C4C-99A9-0A42F3*****"
}
```

Error codes

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

12.6. DescribeParameterGroup

Queries the details of a specified parameter template in a specified region.

You can use parameter templates to manage multiple parameters at a time and quickly apply existing parameters to a PolarDB cluster.

 **Note** Only ApsaraDB PolarDB MySQL-compatible edition clusters support this feature.

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	No	DescribeParameterGroup	The operation that you want to perform. Set the value to DescribeParameterGroup .
ParameterGroupId	String	Yes	pcpg-*****	The ID of the parameter template. Note You can call the DescribeParameterGroups operation to query the details of all parameter templates of a specified region, such as the ID of a parameter template.
RegionId	String	Yes	cn-hangzhou	The ID of the region. Note You can call the DescribeRegions operation to query all regions that are available within your account, such as the region ID.

Response parameters

Parameter	Type	Example	Description
ParameterGroup	Array of ParameterGroup		The details of parameter templates.
CreateTime	String	2021-03-10T08:40:39Z	The time when the parameter template was created. The time follows the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time is displayed in UTC.
DBType	String	MySQL	The type of the database engine.
DBVersion	String	8.0	The version of the database engine. Valid values:

Parameter	Type	Example	Description
ForceRestart	String	1	Indicates whether to restart the cluster when this parameter template is applied. Valid values: 0: A restart is not required. 1: A restart is required.
ParameterCounts	Integer	2	The number of parameters in the parameter template.
ParameterDetail	Array of ParameterDetail		The details of parameters in the parameter template.
ParamName	String	back_log	The name of a parameter in the parameter template.
ParamValue	String	3000	The value of a parameter in the parameter template.
ParameterGroupDesc	String	testgroup	The description of the parameter template.
ParameterGroupId	String	pcpg-*****	The ID of the parameter template.
ParameterGroupName	String	test	The name of the parameter template.
ParameterGroupType	String	1	The type of the parameter template. Valid values: 0: the default parameter template. 1: a custom parameter template. 2: an automatic backup parameter template. After you apply this type of template, the system automatically backs up the original parameter settings of the cluster and saves the backup as a template.
RequestId	String	F1F16757-D31B-49CA-9BF4-305BAF*****	The ID of the request.

Examples

Sample requests


```
http(s)://polardb.aliyuncs.com/?Action=DescribeParameterGroup
&ParameterGroupId=pcpg-*****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeParameterGroupResponse>
  <RequestId>F1F16757-D31B-49CA-9BF4-305BAF*****</RequestId>
  <ParameterGroup>
    <ParameterDetail>
      <ParamValue>3000</ParamValue>
      <ParamName>back_log</ParamName>
    </ParameterDetail>
    <ParameterDetail>
      <ParamValue>ROW</ParamValue>
      <ParamName>binlog_format</ParamName>
    </ParameterDetail>
    <DBVersion>8.0</DBVersion>
    <ParameterGroupId>pcpg-*****</ParameterGroupId>
    <ForceRestart>1</ForceRestart>
    <ParameterGroupName>test</ParameterGroupName>
    <CreateTime>2021-03-10T08:40:39Z</CreateTime>
    <ParameterGroupDesc>testgroup</ParameterGroupDesc>
    <ParameterGroupType>1</ParameterGroupType>
    <ParameterCounts>2</ParameterCounts>
    <DBType>MySQL</DBType>
  </ParameterGroup>
</DescribeParameterGroupResponse>
```

JSON format

```
{
  "RequestId": "F1F16757-D31B-49CA-9BF4-305BAF*****",
  "ParameterGroup": [
    {
      "ParameterDetail": [
        {
          "ParamValue": "3000",
          "ParamName": "back_log"
        },
        {
          "ParamValue": "ROW",
          "ParamName": "binlog_format"
        }
      ],
      "DBVersion": "8.0",
      "ParameterGroupId": "pcpg-*****",
      "ForceRestart": "1",
      "ParameterGroupName": "test",
      "CreateTime": "2021-03-10T08:40:39Z",
      "ParameterGroupDesc": "testgroup",
      "ParameterGroupType": 1,
      "ParameterCounts": 2,
      "DBType": "MySQL"
    }
  ]
}
```

Error codes

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

12.7. DeleteParameterGroup

Deletes a parameter template of a PolarDB cluster.

You can use parameter templates to manage multiple parameters at a time and quickly apply existing parameters to a PolarDB cluster.

 **Note** When you delete a parameter template, the parameter settings that are applied to PolarDB clusters are not affected.

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	No	DeleteParameterGroup	The operation that you want to perform. Set the value to DeleteParameterGroup .
ParameterGroupId	String	Yes	pcpg-*****	The ID of a parameter template.  Note You can call the DescribeParameterGroups operation to query the parameter template ID.
RegionId	String	Yes	cn-hangzhou	The ID of the region.  Note You can call the DescribeRegions operation to query available regions.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4F7195E7-5F74-479D-AF59-1B4BF9*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DeleteParameterGroup
&ParameterGroupId=pcpg-*****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteParameterGroupResponse>
  <RequestId>4F7195E7-5F74-479D-AF59-1B4BF9*****</RequestId>
</DeleteParameterGroupResponse>
```

JSON format

```
{
  "RequestId": "4F7195E7-5F74-479D-AF59-1B4BF9*****"
}
```

Error codes

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

12.8. ModifyDBClusterAndNodesParameters

Modifies cluster parameters and applies them to specified nodes.

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	ModifyDBClusterAndNodesParameters	The operation that you want to perform. Set the value to ModifyDBClusterAndNodesParameters .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
DBNodeIds	String	No	pi-***** , pi-*****	The ID of the node. You can set this parameter to modify the parameters of a specified node or of the cluster. Separate multiple node IDs with commas (.).  Note If this parameter is empty, the cluster parameters are modified.
Parameters	String	No	{"wait_timeout": "86", "innodb_old_blocks_time": "10" }	The JSON string for the parameter and its value.
ParameterGroupID	String	No	pcpg-*****	The ID of the parameter template.

Response parameters

Parameter	Type	Example	Description
RequestId	String	9B7BFB11-C077-4FE3-B051-F69CEB*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=ModifyDBClusterAndNodesParameters
&DBClusterId=pc-*****
&DBNodeIds=pi-*****,pi-*****,
&Parameters={"wait_timeout":"86","innodb_old_blocks_time":"10"}
&ParameterGroupId=pcpg-*****
&Common request parameters
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyDBClusterAndNodesParametersResponse>
  <RequestId>9B7BFB11-C077-4FE3-B051-F69CEB*****</RequestId>
</ModifyDBClusterAndNodesParametersResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "9B7BFB11-C077-4FE3-B051-F69CEB*****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDBCluster.NotFound	The specified DBClusterId is not found.	The error message returned because the specified cluster ID does not exist.

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

12.9. ModifyDBClusterParameters

Modifies the parameters of a specified PolarDB cluster or applies existing parameter templates to a specified cluster.

PolarDB supports the parameter template feature. This allows you to quickly apply existing parameters to a PolarDB cluster.

 **Note** Only PolarDB for MySQL clusters support parameter templates.

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	No	ModifyDBClusterParameters	The operation that you want to perform. Set the value to ModifyDBClusterParameters .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query information about all clusters that are deployed in a specified region, such as the cluster ID.

Parameter	Type	Required	Example	Description
Parameters	String	No	<code>{"wait_timeout": "86", "innodb_old_blocks_time": "10"}</code>	The JSON string that consists of parameters and values. The parameter values are strings, for example, <code>{"wait_timeout": "86", "innodb_old_blocks_time": "10"}</code>.  Note - You can call the DescribeDBClusterParameters operation to query the parameters of the PolarDB cluster. - For PolarDB for MySQL clusters or PolarDB for Oracle clusters, this parameter is required. - For PolarDB for MySQL clusters, you must specify this parameter or the <code>ParameterGroupId</code> parameter.
ParameterGroupId	String	No	<code>pcpg-*****</code>	The ID of the parameter template.  Note - You can call the DescribeParameterGroups operation to query the parameter template ID. - You must specify this parameter or the <code>Parameters</code> parameter. - This parameter is supported by only PolarDB for MySQL clusters.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C5D526E5-91B5-48B8-B980-FE07FF*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=ModifyDBClusterParameters
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyDBClusterParametersResponse>
<RequestId>C5D526E5-91B5-48B8-B980-FE07FF*****</RequestId>
</ModifyDBClusterParametersResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "C5D526E5-91B5-48B8-B980-FE07FF*****"
}
```

Error codes

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

12.10. ModifyDBNodesParameters

Modifies the parameters of a node and applies them to specified nodes.

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
-----------	------	----------	---------	-------------

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDBNodesParameters	The operation that you want to perform. Set the value to ModifyDBNodesParameters .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
DBNodeIds	String	Yes	pi-*****, pi-*****	The ID of the node. You can specify multiple node IDs. Separate multiple node IDs with commas (,).
Parameters	String	No	{"wait_timeout": "86", "innodb_old_blocks_time": "10"}	The JSON string for the parameter and its value.
ParameterGroupId	String	No	pcpg-*****	The ID of the parameter template.

Response parameters

Parameter	Type	Example	Description
RequestId	String	EBEAA83D-1734-42E3-85E3-E25F6E*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=ModifyDBNodesParameters
&DBClusterId=pc-*****
&DBNodeIds=pi-*****, pi-*****
&Parameters={"wait_timeout": "86", "innodb_old_blocks_time": "10"}
&ParameterGroupId=pcpg-*****
&Common request parameters
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type: application/xml
<ModifyDBNodesParametersResponse>
  <RequestId>EBEAA83D-1734-42E3-85E3-E25F6E*****</RequestId>
</ModifyDBNodesParametersResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "EBEAA83D-1734-42E3-85E3-E25F6E*****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDBCluster.Not Found	The specified DBClusterId is not found.	The error message returned because the specified cluster ID does not exist.

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

13.Connection points

13.1. CreateDBEndpointAddress

Creates a public-facing or classic network endpoint for a specified PolarDB cluster.

Note

- You can create a public-facing or classic network endpoint for the primary endpoint, the default cluster endpoint, or a custom cluster endpoint.
- You can create classic network endpoints only on the China site (aliyun.com).

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	No	CreateDBEndpointAddress	The operation that you want to perform. Set the value to CreateDBEndpointAddress .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
DBEndpointId	String	Yes	pe-*****	The ID of the endpoint.  Note You can call the DescribeDBClusterEndpoints operation to query endpoint IDs.
ConnectionStringPrefix	String	No	test-1	The prefix of the new endpoint. The prefix must meet the following requirements: • It can contain lowercase letters, digits, and hyphens (-). • It must start with a letter and end with a digit or a letter. • It must be 6 to 30 characters in length.

Parameter	Type	Required	Example	Description
NetType	String	Yes	Public	The network type of the endpoint. Set the value to Public (public network).

Response parameters

Parameter	Type	Example	Description
RequestId	String	6BD9CDE4-5E7B-4BF3-9BB8-83C73E*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=CreateDBEndpointAddress
&DBClusterId=pc-*****
&DBEndpointId=pe-*****
&NetType=Public
&<Common Request Parameters>
```

Sample success responses

XML **format**

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateDBEndpointAddressResponse>
<RequestId>6BD9CDE4-5E7B-4BF3-9BB8-83C73E*****</RequestId>
</CreateDBEndpointAddressResponse>
```

JSON **format**

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "6BD9CDE4-5E7B-4BF3-9BB8-83C73E*****"
}
```

Error codes

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

13.2. CreateDBClusterEndpoint

Creates a custom cluster endpoint for a specified PolarDB cluster.

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	No	CreateDBClusterEndpoint	The operation that you want to perform. Set the value to CreateDBClusterEndpoint .
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster.
EndpointType	String	Yes	Custom	The type of the cluster endpoint. Set the value to Custom .
				The reader nodes to be associated with the endpoint. If you need to specify multiple reader nodes, separate the reader nodes with commas (.). By default, all the nodes in the specified cluster are associated with the cluster endpoint.  Note - You must specify the node ID for each PolarDB for MySQL cluster. - You must specify the role name of each node for each PolarDB for PostgreSQL or PolarDB for Oracle cluster. The valid values of role names include <code>Writer</code>, <code>Reader1</code>, and <code>Reader2</code>. - If you set ReadWriteMode to ReadOnly, only one node can be associated with the cluster endpoint. If the only node becomes faulty, the cluster endpoint may be unavailable for up to an hour. We recommend that you do not associate only one node with the cluster endpoint in production environments. We recommend that you

Parameter	Type	Required	Example	Description
Nodes	String	No	pi-*****,pi-*****	associate at least two nodes with the cluster endpoint to improve service availability. - If you set ReadWriteMode to ReadWrite, you must associate at least two nodes with the cluster endpoint. - No limits are imposed on the two nodes that you select for each PolarDB for MySQL cluster. If the two nodes are read-only nodes, write requests are forwarded to the primary node. - The following limit applies to PolarDB for PostgreSQL and PolarDB for Oracle clusters: One of the selected nodes must be the primary node.

Parameter	Type	Required	Example	Description
ReadWriteMode	String	No	ReadOnly	The read/write mode. Valid values: ReadWrite: receives and forwards read and write requests. Automatic read/write splitting is enabled. ReadOnly: receives and forwards only read requests. Default value: ReadOnly
AutoAddNewNodes	String	No	Disable	Specifies whether to automatically associate newly added nodes with the cluster endpoint. Valid values: Enable: Newly added nodes are automatically associated with the cluster endpoint. Disable: Newly added nodes are not automatically associated with the cluster endpoint. Default value: Disable
				The advanced configurations of the cluster endpoint. You must specify the configurations in the JSON format. You can specify the configurations of the following attributes: consistency level, transaction splitting, connection pool, and offload reads from the primary node. - Specify the consistency level in the format of <code>{"ConsistLevel\":"Consistency level\}"</code>. Valid values: 0: eventual consistency. 1: session consistency. The value 1 is the default value. 2: global consistency. - Specify the transaction splitting feature in the format of <code>{"DistributedTransaction\":"Transaction splitting\}"</code>. Valid values: on: enables the transaction splitting feature. By default, the feature is enabled. off: disables the transaction splitting feature.

Parameter	Type	Required	Example	Description
EndpointConfig	String	No	<code>{"ConsistLevel": "1", "DistributedTransaction": "on"}</code>	- Specify the offload reads from the primary node feature in the format of <code>{"MasterAcceptReads\":"offload reads from the primary node\}"}</code>. Valid values: on: The primary node accepts read requests. off: The primary node does not accept read requests. The value off is the default value. - Specify the connection pool in the format of <code>{"ConnectionPersist\":"Connection pool\}"}</code>. Valid values: off: disables the connection pool. By default, the connection pool is disabled. Session: enables the session-level connection pool. Transaction: enables the transaction-level connection pool.

Parameter	Type	Required	Example	Description
				Note - You can specify the transaction splitting, connection pool, and offload reads from the primary node features for a PolarDB for MySQL cluster only if ReadWriteMode is set to ReadWrite for the cluster endpoint. - Only PolarDB for MySQL supports global consistency. - If the ReadWriteMode parameter is set to ReadOnly, the value for the consistency level must be 0. - You can use one record to specify the consistency level, transaction splitting, connection pool, and offload reads from the primary node features, such as <pre>{\"ConsistLevel\": \"1\", \"DistributedTransaction\": \"on\", \"ConnectionPersist\": \"Session\", \"MasterAcceptReads\": \"on\"}</pre>. - The setting of the transaction splitting feature is affected by the specified consistency level. For example, if you set the consistency level to 0, transaction splitting cannot be enabled. If you set the consistency level to 1 or 2, transaction splitting can be enabled.

Parameter	Type	Required	Example	Description
ClientToken	String	No	6000170000591aed949d0f***** *****	The client token that is used to ensure the idempotency of requests. If an API operation is idempotent, the API operation returns the same result for identical requests. You can use the client to generate the value. Make sure that the value is unique for different requests. The token is case-sensitive. The token can contain only ASCII characters and cannot exceed 64 characters in length.
DBEndpointDescription	String	No	test	The name of the custom cluster endpoint.

Response parameters

Parameter	Type	Example	Description
RequestId	String	CD35F3-F3-44CA-AFFF-BAF869*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=CreateDBClusterEndpoint
&DBClusterId=pc-*****
&EndpointType=Custom
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateDBClusterEndpointResponse>
  <RequestId>CD35F3-F3-44CA-AFFF-BAF869*****</RequestId>
</CreateDBClusterEndpointResponse>
```

JSON format

```
{
  "RequestId": "CD35F3-F3-44CA-AFFF-BAF869*****"
}
```

Error codes

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

13.3. DescribeDBClusterEndpoints

Queries the endpoints of a specified PolarDB cluster.

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	No	DescribeDBClusterEndpoints	The operation that you want to perform. Set the value to DescribeDBClusterEndpoints .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query the details of all clusters that belong to your account, such as the cluster ID.
DBEndpointId	String	No	pe-*****	The ID of the cluster endpoint.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2DC120BF-6EBA-4C63-BE99-B09F9E*****	The ID of the request.
Items	Array of DBEndpoint		The details of the endpoint for the cluster.

Parameter	Type	Example	Description
NodeWithRoles	String	Reader1	The role name of each node in the endpoint. The role name of the primary node is Writer. Multiple read-only nodes can be associated with an endpoint. Therefore, the role name of each read-only node is suffixed with a number. For example, you can use Reader1 and Reader2 as the role names.  Note This parameter is returned for only PolarDB for PostgreSQL clusters and PolarDB for Oracle clusters.
Nodes	String	pi-*****;pi-*****	The list of nodes that are configured for the endpoint.
ReadWriteMode	String	ReadOnly	The read/write mode. Valid values: ReadWrite: receives and forwards read and write requests (automatic read/write splitting). ReadOnly: receives and forwards only read requests.
AddressItems	Array of Address		The information about the connection string.
VSwitchId	String	vsw-*****	The ID of the vSwitch associated with the specified VPC.
PrivateZoneConnectionString	String	***.***.***.com	The private domain name that is bound to the endpoint.
ConnectionString	String	*****.rwlb.polardb-pg-public.rds.aliyuncs.com	The connection string.
NetType	String	Private	The type of network. Valid values: Public: Internet Private: virtual private cloud (VPC)
Port	String	1521	The port number of the endpoint.

Parameter	Type	Example	Description
VpcInstanceId	String	pe-*****	The ID of the VPC-connected instance.  Note This parameter is returned for only PolarDB for MySQL clusters.
VPCId	String	vpc-*****	The ID of the VPC.
IPAddress	String	192.***.***.***	The IP address.
DBEndpointId	String	pe-*****	The ID of the endpoint.
EndpointConfig	String	{\"DistributedTransaction\": \"off\", \"ConsistLevel\": \"0\", \"LoadBalanceStrategy\": \"load\", \"MasterAcceptReads\": \"on\"}	The advanced configurations of the cluster endpoint. • DistributedTransaction: indicates whether transaction splitting is enabled. Valid values: ◦ on: Transaction splitting is enabled. ◦ off: Transaction splitting is disabled. • ConsistLevel: the consistency level of sessions. Valid values: ◦ 0: eventual consistency ◦ 1: session consistency ◦ 2: global consistency • LoadBalanceStrategy: the load balancing policy that automatically schedules loads. Set the value to load. • MasterAcceptReads: indicates whether the primary node processes read requests. Valid values: ◦ on: The primary node processes read requests. ◦ off: The primary node does not process read requests.
DBEndpointDescription	String	test	The name of the custom cluster endpoint.  Note This parameter is returned for only custom cluster endpoints.

Parameter	Type	Example	Description
EndpointType	String	Custom	The type of the endpoint for the cluster. Valid values: • Cluster: the default cluster endpoint • Primary: the primary endpoint of the cluster • Custom: a custom cluster endpoint
AutoAddNewNodes	String	Enable	Indicates whether newly added nodes are automatically associated with the default cluster endpoint. Valid values: • Enable • Disable

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeDBClusterEndpoints
&DBClusterId=pc-*****
&<Common Request Parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDBClusterEndpointsResponse>
<RequestId>2DC120BF-6EBA-4C63-BE99-B09F9E*****</RequestId>
<Items>
  <DBEndpointId>pe-*****</DBEndpointId>
  <NodeWithRoles>{"pi-*****":"Reader2","pi-*****":"Reader1"}</NodeWithRoles>
  <AutoAddNewNodes>Disable</AutoAddNewNodes>
  <EndpointType>Custom</EndpointType>
  <AddressItems>
    <VPCId>vpc-*****</VPCId>
    <Port>1521</Port>
    <VSwitchId>vsw-*****</VSwitchId>
    <ConnectionString>pe-*****.rwlb.polar-db-pg-public.rds.aliyuncs.com</ConnectionString>
    <IPAddress>192.***.***.***</IPAddress>
    <NetType>Private</NetType>
  </AddressItems>
  <Nodes>pi-*****,pi-*****</Nodes>
  <ReadWriteMode>ReadOnly</ReadWriteMode>
  <EndpointConfig>{"DistributedTransaction":"off","ConsistLevel":"0","LoadBalanceStrategy":"load","MasterAcceptReads":"on"}</EndpointConfig>
  <DBEndpointDescription>test</DBEndpointDescription>
</Items>
</DescribeDBClusterEndpointsResponse>
```

JSON **format**

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "2DC120BF-6EBA-4C63-BE99-B09F9E*****",
  "Items" : [ {
    "DBEndpointId" : "pe-*****",
    "NodeWithRoles" : "{\"pi-*****\\\":\\\"Reader2\\\",\\\"pi-*****\\\":\\\"Reader1\\\"}\"
  },
  "AutoAddNewNodes" : "Disable",
  "EndpointType" : "Custom",
  "AddressItems" : [ {
    "VPCId" : "vpc-*****",
    "Port" : "1521",
    "VSwitchId" : "vsw-*****",
    "ConnectionString" : "pe-*****.rwlb.polardb-pg-public.rds.aliyuncs.com",
    "IPAddress" : "192.***.***.***",
    "NetType" : "Private"
  } ],
  "Nodes" : "pi-*****,pi-*****",
  "ReadWriteMode" : "ReadOnly",
  "EndpointConfig" : "{\"DistributedTransaction\\\":\\\"off\\\",\\\"ConsistLevel\\\":\\\"0\\\",\\\"LoadBalanceStrategy\\\":\\\"load\\\",\\\"MasterAcceptReads\\\":\\\"on\\\"\"}",
  "DBEndpointDescription" : "test"
} ]
}

```

Error codes

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

13.4. ModifyDBClusterEndpoint

Modifies the attributes of a PolarDB cluster endpoint. For example, you can modify the following attributes for a cluster endpoint: read/write mode, consistency level, transaction splitting, offload reads from the primary node, and connection pool. You can also call the operation to specify whether newly added nodes are automatically associated with a specified cluster endpoint.

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	No	ModifyDBClusterEndpoint	The operation that you want to perform. Set the value to ModifyDBClusterEndpoint .

Parameter	Type	Required	Example	Description
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB for MySQL cluster.
DBEndpointId	String	Yes	pe-*****	The ID of the cluster endpoint.
Nodes	String	No	pi-***** , pi-*****	The reader nodes to be associated with the endpoint. If you need to specify multiple reader nodes, separate the reader nodes with commas (.). If you do not specify this parameter, the predefined nodes are used by default.  Note - You must specify the node ID for each PolarDB for MySQL cluster. - You must specify the role name of each node for each PolarDB for PostgreSQL or PolarDB for Oracle cluster. The valid values of role names include <code>Writer</code>, <code>Reader1</code>, and <code>Reader2</code>. - If you set ReadWriteMode to ReadOnly, only one node can be associated with the cluster endpoint. If the only node becomes faulty, the cluster endpoint may be unavailable for up to an hour. We recommend that you do not associate only one node with the cluster endpoint in production environments. We recommend that you associate at least two nodes with the cluster endpoint to improve service availability. - If you set ReadWriteMode to ReadWrite, you must associate at least two nodes with the cluster endpoint.

Parameter	Type	Required	Example	Description
				- No limits are imposed on the two nodes that you select for each PolarDB for MySQL cluster. If the two nodes are read-only nodes, write requests are forwarded to the primary node. - The following limit applies to PolarDB for PostgreSQL and PolarDB for Oracle clusters: One of the selected nodes must be the primary node.
ReadWriteMode	String	No	ReadWrite	The read/write mode. Valid values: ReadWrite: The cluster endpoint receives and forwards read and write requests. Automatic read/write splitting is enabled. ReadOnly: The cluster endpoint only has read permissions on the database.
AutoAddNewNodes	String	No	Enable	Specifies whether to automatically associate newly added nodes with the cluster endpoint. Valid values: Enable: yes Disable: no (default)
				The advanced configurations of the cluster endpoint. You must specify the configurations in the JSON format. You can specify the configurations of the following attributes: consistency level, transaction splitting, connection pool, and offload reads from the primary node. - Specify the consistency level in the format of <code>{"ConsistLevel\":\"Consistency level\"}</code>. Valid values: 0: eventual consistency.

Parameter	Type	Required	Example	Description
Endpoint Config	String	No	<code>{"ConsistLevel": "1", "DistributedTransaction": "on", "MasterAcceptReads": "off", "ConnectionPersist": "on"}</code>	◦ 1: session consistency. The value 1 is the default value. ◦ 2: global consistency. • Specify the transaction splitting feature in the format of <code>{"DistributedTransaction": "Transaction splitting"}</code>. Valid values: ◦ on: enables the transaction splitting feature. By default, the feature is enabled. ◦ off: disables the transaction splitting feature. • Specify the offload reads from the primary node feature in the format of <code>{"MasterAcceptReads": "Offload reads from the primary node"}</code>. Valid values: ◦ on: The primary node accepts read requests. ◦ off: The primary node does not accept read requests. The value off is the default value. • Specify the connection pool in the format of <code>{"ConnectionPersist": "Connection pool"}</code>. Valid values: ◦ off: disables the connection pool. By default, the connection pool is disabled. ◦ Session: enables the session-level connection pool. ◦ Transaction: enables the transaction-level connection pool.

Parameter	Type	Required	Example	Description
				Note - You can specify the transaction splitting, connection pool, and offload reads from the primary node features for a PolarDB for MySQL cluster only if ReadWriteMode is set to ReadWrite for the cluster endpoint. - Only PolarDB for MySQL supports global consistency. - If the ReadWriteMode parameter is set to ReadOnly, the value for the consistency level must be 0. - You can use one record to specify the consistency level, transaction splitting, connection pool, and offload reads from the primary node features, such as <pre>{\"ConsistLevel\": \"1\", \"DistributedTransaction\": \"on\", \"ConnectionPersist\": \"Session\", \"MasterAcceptReads\": \"on\"}</pre>. - The setting of the transaction splitting feature is affected by the specified consistency level. For example, if you set the consistency level to 0, transaction splitting cannot be enabled. If you set the consistency level to 1 or 2, transaction splitting can be enabled.

Parameter	Type	Required	Example	Description
DBEndpointDescription	String	No	test	The name of the custom cluster endpoint.  Note This parameter takes effect for only custom cluster endpoints.

Response parameters

Parameter	Type	Example	Description
RequestId	String	CD3FA5F3-FAF3-44CA-AFFF-BAF869*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=ModifyDBClusterEndpoint
&DBClusterId=pc-*****
&DBEndpointId=pe-*****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyDBClusterEndpointResponse>
<RequestId>CD3FA5F3-FAF3-44CA-AFFF-BAF869*****</RequestId>
</ModifyDBClusterEndpointResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "CD3FA5F3-FAF3-44CA-AFFF-BAF869*****"
}
```

Error codes

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

13.5. ModifyDBEndpointAddress

Modifies the endpoints of a specified PolarDB cluster, including the primary endpoint, the default cluster endpoint, custom cluster endpoints, and private domain names.

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	No	ModifyDBEndpointAddress	The operation that you want to perform. Set the value to ModifyDBEndpointAddress .
DBClusterId	String	Yes	pc-*****	The ID of the cluster. Note You can call the DescribeDBClusters operation to query the details of all clusters that belong to your account, such as the cluster ID.
DBEndpointId	String	Yes	pe-*****	The ID of the endpoint. Note You can call the DescribeDBClusterEndpoints operation to query endpoint IDs.
NetType	String	Yes	Public	The network type of the endpoint. Valid values: Public: Internet Private: virtual private cloud (VPC)

Parameter	Type	Required	Example	Description
ConnectionStringPrefix	String	No	example	The prefix of the new endpoint. The prefix must meet the following requirements: • It can contain lowercase letters, digits, and hyphens (-). • It must start with a letter and end with a digit or a letter. • It must be 6 to 30 characters in length.
PrivateZoneAddressPrefix	String	No	aliyundoc	The prefix of the private domain name. The prefix must meet the following requirements: • It can contain lowercase letters, digits, and hyphens (-). • It must start with a letter and end with a digit or a letter. • It must be 6 to 30 characters in length.  Note • You can bind a private domain name to each VPC-facing endpoint of a PolarDB cluster. Private domain names apply to only the VPC that you specify within the current region. Private domain names are managed through PrivateZone. You can use the CNAME record of PrivateZone to map domain names to PolarDB. You are charged a small amount of fees for this feature. For more information, see Pricing. • This parameter takes effect only when NetType is set to Private.

Parameter	Type	Required	Example	Description
PrivateZoneName	String	No	aliyundoc.com	The name of the private zone.  Note This parameter takes effect only when NetType is set to Private.
Port	String	No	3306	The port number. Valid values: 3000 to 5999.  Note Only ApsaraDB PolarDB MySQL-compatible edition clusters support this parameter. If you leave this parameter empty, the default port 3306 is used.

Response parameters

Parameter	Type	Example	Description
RequestId	String	D0CEC6AC-7760-409A-A0D5-E6CD86*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=ModifyDBEndpointAddress
&DBClusterId=pc-*****
&DBEndpointId=pe-*****
&NetType=Public
&<Common Request Parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyDBEndpointAddressResponse>
<RequestId>D0CEC6AC-7760-409A-A0D5-E6CD86*****</RequestId>
</ModifyDBEndpointAddressResponse>
```

JSON format


```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "D0CEC6AC-7760-409A-A0D5-E6CD86*****"
}
```

Error codes

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

13.6. DeleteDBEndpointAddress

Deletes the public-facing endpoint or a classic network endpoint of a specified PolarDB cluster.

Note

- You can delete a public-facing or classic network endpoint of the primary endpoint, the default cluster endpoint, or a custom cluster endpoint.
- Classic network endpoints are supported only on the China site (aliyun.com). Therefore, you do not need to delete classic network endpoints on the International site (alibabacloud.com).

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	No	DeleteDBEndpointAddress	The operation that you want to perform. Set the value to DeleteDBEndpointAddress .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query the details of all clusters that belong to your account, such as the cluster ID.

Parameter	Type	Required	Example	Description
DBEndpointId	String	Yes	pe-*****	The ID of the endpoint.  Note You can call the DescribeDBClusterEndpoints operation to query the endpoints of a specified PolarDB cluster.
NetType	String	Yes	Public	The network type of the endpoint. Set the value to Public (public network).

Response parameters

Parameter	Type	Example	Description
RequestId	String	D0CEC6AC-7760-409A-A0D5-E6CD86*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DeleteDBEndpointAddress
&DBClusterId=pc-*****
&DBEndpointId=pe-*****
&NetType=Public
&<Common Request Parameters>
```

Sample success responses

XML **format**

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeleteDBEndpointAddressResponse>
<RequestId>D0CEC6AC-7760-409A-A0D5-E6CD86*****</RequestId>
</DeleteDBEndpointAddressResponse>
```

JSON **format**

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "D0CEC6AC-7760-409A-A0D5-E6CD86*****"
}
```

Error codes

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

13.7. DeleteDBClusterEndpoint

Releases the custom cluster endpoint of a PolarDB cluster.

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	No	DeleteDBClusterEndpoint	The operation that you want to perform. Set the value to DeleteDBClusterEndpoint .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
DBEndpointId	String	Yes	pe-*****	The ID of the custom cluster endpoint.

Response parameters

Parameter	Type	Example	Description
RequestId	String	CD3FA5F3-FAF3-44CA-AFFF-BAF869*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DeleteDBClusterEndpoint
&DBClusterId=pc-*****
&DBEndpointId=pe-*****
&<common request parameters>
```

Sample success responses

`XML` `format`

```
<DeleteDBClusterEndpointResponse>
  <RequestId>CD3FA5F3-FAF3-44CA-AFFF-BAF869*****</RequestId>
</DeleteDBClusterEndpointResponse>
```

JSON format

```
{
  "RequestId": "CD3FA5F3-FAF3-44CA-AFFF-BAF869*****"
}
```

Error codes

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

14.Logs

14.1. DescribeSlowLogRecords

Queries details about the slow query logs of a PolarDB cluster.

 **Note** This operation is supported by only PolarDB for MySQL clusters.

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	No	DescribeSlowLogRecords	The operation that you want to perform. Set the value to DescribeSlowLogRecords .
DBClusterId	String	Yes	pc-*****	The IDs of the clusters.  Note You can call the DescribeDBClusters operation to query information about all your PolarDB clusters that are deployed in a specified region. The returned information includes the ID of each cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the cluster.  Note You can call the DescribeRegions operation to query all regions that are available within your account, such as the region ID.

Parameter	Type	Required	Example	Description
StartTime	String	Yes	2022-06-12T09:00Z	The beginning of the time range to query. Specify the time in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time must be in UTC.  Note You can specify a time range of up to 30 days.
EndTime	String	Yes	2022-06-12T22:00Z	The end of the time range to query. The end time must be later than the start time. The specified time range must be within 24 hours. Specify the time in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time must be in UTC.
DBName	String	No	testdb	The name of the database.
PageSize	Integer	No	30	The number of entries to return on each page. Valid values: 30 50 100 Default value: 30.
PageNumber	Integer	No	1	The number of the page to return. The value must be an integer that is larger than 0. Default value: 1.
SQLHASH	String	No	U2FsdGVk****	The unique ID of the SQL statement. The ID is used to obtain the slow query logs of the SQL statement.

Response parameters

Parameter	Type	Example	Description
Items	Array of SQLSlowRecord		Details about slow query logs.
SQLSlowRecord			

Parameter	Type	Example	Description
DBName	String	testdb	The name of the database.
DBNodeid	String	pi-*****	The ID of the node.
ExecutionStartTime	String	2021-04-07T03:47:24Z	The start time of the query execution. The time is in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time is displayed in UTC.
HostAddress	String	testdb[testdb] @[100.**.**.242]	The IP address of the client that is used to connect to the database.
LockTimes	Long	0	The duration when the SQL statement was locked. Unit: seconds.
ParseRowCounts	Long	0	The number of parsed rows.
QueryTimeMS	Long	50	The execution duration of the query. Unit: milliseconds.
QueryTimes	Long	20	The amount of time that was consumed to execute the SQL statement. Unit: seconds.
ReturnRowCounts	Long	0	The number of entries returned.
SQLText	String	<code>/* Query from *** by user 111 */ SELECT sleep(20)</code>	The query statement.
TotalRecordCount	Integer	1	The total number of SQL statements.
PageNumber	Integer	1	The page number of the returned page.
RequestId	String	A7E6A8FD-C50B-46B2-BA85-D8B8D3*****	The ID of the request.
DBClusterId	String	pc-*****	The IDs of the clusters.
Engine	String	polardb_mysql	The database engine that databases in the clusters run.

Parameter	Type	Example	Description
PageRecordCount	Integer	1	The number of entries returned per page.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeSlowLogRecords
&DBClusterId=pc-*****
&RegionId=cn-hangzhou
&StartTime=2022-06-12T09:00Z
&EndTime=2022-06-12T22:00Z
&<Common request parameters>
```

Sample success responses

XML format

```
<TotalRecordCount>1</TotalRecordCount>
<PageRecordCount>1</PageRecordCount>
<RequestId>A7E6A8FD-C50B-46B2-BA85-D8B8D3*****</RequestId>
<PageNumber>1</PageNumber>
<DBClusterId>pc-*****</DBClusterId>
<Items>
  <SQLSlowRecord>
    <QueryTimes>20</QueryTimes>
    <ExecutionStartTime>2022-06-12T09:01:24Z</ExecutionStartTime>
    <ReturnRowCounts>1</ReturnRowCounts>
    <LockTimes>0</LockTimes>
    <DBName>test_db</DBName>
    <ParseRowCounts>0</ParseRowCounts>
    <DBNodeId>pi-*****</DBNodeId>
    <QueryTimeMS>50</QueryTimeMS>
    <HostAddress>testdb[testdb] @ [100.**.**.242]</HostAddress>
    <SQLText>/* Query from *** by user 111 */ SELECT sleep(20)</SQLText>
  </SQLSlowRecord>
</Items>
<Engine>polardb_mysql</Engine>
```

JSON format


```
{
  "TotalRecordCount": 1,
  "PageRecordCount": 1,
  "RequestId": "A7E6A8FD-C50B-46B2-BA85-D8B8D3*****",
  "PageNumber": 1,
  "DBClusterId": "pc-*****",
  "Items": {
    "SQLSlowRecord": [
      {
        "QueryTimes": 20,
        "ExecutionStartTime": "2022-06-12T09:01:24Z",
        "ReturnRowCounts": 1,
        "LockTimes": 0,
        "DBName": "test_db",
        "ParseRowCounts": 0,
        "DBNodeId": "pi-*****",
        "QueryTimeMS": 50,
        "HostAddress": "testdb[testdb] @ [100.**.**.242]",
        "SQLText": "/* Query from *** by user 111 */ SELECT sleep(20)"
      }
    ]
  },
  "Engine": "polardb_mysql"
}
```

Error codes

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

14.2. DescribeSlowLogs

Queries the details of the slow query logs of a PolarDB cluster.

 **Note** This operation is supported by only PolarDB for MySQL clusters.

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	DescribeSlowLog s	The operation that you want to perform. Set the value to DescribeSlowLogs .

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the cluster.
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
StartTime	String	Yes	2021-05-01Z	The beginning of the time range to query. Specify the time in the yyyy-MM-ddZ format. The time must be in UTC.
EndTime	String	Yes	2021-05-30Z	The end of the time range to query. The end time must be later than the start time. The time span between the start time and the end time cannot exceed 31 days. Specify the time in the yyyy-MM-ddZ format. The time must be in UTC.
DBName	String	No	PolarDB_MySQL	The name of the database.
PageSize	Integer	No	30	The number of entries to return on each page. Valid values: 30 to 100. Default value: 30.
PageNumber	Integer	No	1	The number of the page to return. The value must be an integer that is greater than 0. Default value: 1.

Response parameters

Parameter	Type	Example	Description
TotalRecordCount	Integer	5	The total number of entries.
PageRecordCount	Integer	6	The number of SQL statements that are returned on the current page.
EndTime	String	2021-05-30Z	The end date of the time range that was queried.
RequestId	String	2553A660-E4EB-4AF4-A402-8AFF70A49143	The ID of the request.

Parameter	Type	Example	Description
PageNumber	Integer	3	The page number of the returned page.
StartTime	String	2021-05-01Z	The start date of the time range that was queried.
DBClusterId	String	pc-*****	The ID of the cluster.
Items	Array of SQLSlowLog		Details about slow queries.
SQLSlowLog			
SQLText	String	select id,name from tb_table	The SQL statement.
ReturnMaxRow Count	Long	3	The largest number of rows that were returned by a specific SQL statement in the query.
CreateTime	String	2021-05-30Z	The date when the data was generated.
MaxExecutionTime	Long	60	The longest execution duration of a specific SQL statement in the query. Unit: seconds.
ParseTotalRow Counts	Long	2	The total number of rows that were parsed by all SQL statements in the query.
TotalLockTimes	Long	1	The total lock duration that was caused by all SQL statements in the query. Unit: seconds.
TotalExecution Times	Long	2	The total duration that was caused by all SQL statements in the query. Unit: seconds.
DBNodeId	String	pi-*****	The ID of the node.
SQLHASH	String	U2FsdGVkxxxx	The unique ID of the SQL statement. The ID is used to obtain the slow query logs of the SQL statement.

Parameter	Type	Example	Description
ParseMaxRowCount	Long	1	The largest number of rows that were parsed by a specific SQL statement in the query.
MaxLockTime	Long	1	The longest lock duration that was caused by a specific SQL statement in the query. Unit: seconds.
ReturnTotalRowCounts	Long	1	The total number of rows that were returned by all SQL statements in the query.
DBName	String	PolarDB_MySQL	The name of the database.
TotalExecutionCounts	Long	2	The total number of executions the SQL statements.
Engine	String	polardb_mysql	The database engine.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeSlowLogs
&RegionId=cn-hangzhou
&DBClusterId=pc-*****
&StartTime=2021-05-01Z
&EndTime=2021-05-30Z
&DBName=PolarDB_MySQL
&PageSize=30
&PageNumber=1
&<Common request parameters>
```

Sample responses

XML format

```

HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeSlowLogsResponse>
  <TotalRecordCount>5</TotalRecordCount>
  <PageRecordCount>6</PageRecordCount>
  <EndTime>2021-05-30Z</EndTime>
  <RequestId>2553A660-E4EB-4AF4-A402-8AFF70A49143</RequestId>
  <PageNumber>3</PageNumber>
  <StartTime>2021-05-01Z</StartTime>
  <DBClusterId>pc-*****</DBClusterId>
  <Items>
    <SQLText>select id,name from tb_table</SQLText>
    <ReturnMaxRowCount>3</ReturnMaxRowCount>
    <CreateTime>2021-05-30Z</CreateTime>
    <MaxExecutionTime>60</MaxExecutionTime>
    <ParseTotalRowCounts>2</ParseTotalRowCounts>
    <TotalLockTimes>1</TotalLockTimes>
    <TotalExecutionTimes>2</TotalExecutionTimes>
    <DBNodeId>pi-*****</DBNodeId>
    <SQLHASH>U2FsdGVkxxxx</SQLHASH>
    <ParseMaxRowCount>1</ParseMaxRowCount>
    <MaxLockTime>1</MaxLockTime>
    <ReturnTotalRowCounts>1</ReturnTotalRowCounts>
    <DBName>PolarDB_MySQL</DBName>
    <TotalExecutionCounts>2</TotalExecutionCounts>
  </Items>
  <Engine>polardb_mysql</Engine>
</DescribeSlowLogsResponse>

```

JSON **format**

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalRecordCount" : 5,
  "PageRecordCount" : 6,
  "EndTime" : "2021-05-30Z",
  "RequestId" : "2553A660-E4EB-4AF4-A402-8AFF70A49143",
  "PageNumber" : 3,
  "StartTime" : "2021-05-01Z",
  "DBClusterId" : "pc-*****",
  "Items" : [ {
    "SQLText" : "select id,name from tb_table",
    "ReturnMaxRowCount" : 3,
    "CreateTime" : "2021-05-30Z",
    "MaxExecutionTime" : 60,
    "ParseTotalRowCounts" : 2,
    "TotalLockTimes" : 1,
    "TotalExecutionTimes" : 2,
    "DBNodeId" : "pi-*****",
    "SQLHASH" : "U2FsdGVkxxxx",
    "ParseMaxRowCount" : 1,
    "MaxLockTime" : 1,
    "ReturnTotalRowCounts" : 1,
    "DBName" : "PolarDB_MySQL",
    "TotalExecutionCounts" : 2
  } ],
  "Engine" : "polardb_mysql"
}

```

Error codes

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

14.3. DescribeDBClusterAuditLogCollector

Queries whether SQL data collector is enabled for a PolarDB cluster. The features of SQL data collector include audit logs and SQL Explorer.

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
-----------	------	----------	---------	-------------

Parameter	Type	Required	Example	Description
Action	String	No	DescribeDBClusterAuditLogCollector	The operation that you want to perform. Set the value to DescribeDBClusterAuditLogCollector .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.

Response parameters

Parameter	Type	Example	Description
CollectorStatus	String	Disabled	The status of SQL data collector. Valid values: - Enable: SQL data collector is enabled. - Disabled: SQL data collector is disabled.
RequestId	String	59011D2B-2A38-4207-A86C-72BC1F882D19	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DescribeDBClusterAuditLogCollector
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDBClusterAuditLogCollectorResponse>
  <CollectorStatus>Disabled</CollectorStatus>
  <RequestId>59011D2B-2A38-4207-A86C-72BC1F*****</RequestId>
</DescribeDBClusterAuditLogCollectorResponse>
```

JSON format

```
{
  "CollectorStatus": "Disabled",
  "RequestId": "59011D2B-2A38-4207-A86C-72BC1F*****"
}
```

Error codes

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

14.4.

ModifyDBClusterAuditLogCollector

Enables or disables SQL data collector for a PolarDB cluster. The features of the SQL data collector include audit logs and SQL Explorer.

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	No	ModifyDBClusterAuditLogCollector	The operation that you want to perform. Set the value to ModifyDBClusterAuditLogCollector .
CollectorStatus	String	Yes	Enable	Specifies whether to enable or disable SQL data collector. Valid values: - Enable: enables SQL data collector. - Disable: disables SQL data collector.
DBClusterId	String	Yes	pc-*****	The ID of the cluster.

Response parameters

Parameter	Type	Example	Description
RequestId	String	22C0ACF0-DD29-4B67-9190-B7A48C*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=ModifyDBClusterAuditLogCollector
&CollectorStatus=Enable
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

`XML` format


```
<ModifyDBClusterAuditLogCollectorResponse>
  <RequestId>22C0ACF0-DD29-4B67-9190-B7A48C*****</RequestId>
</ModifyDBClusterAuditLogCollectorResponse>
```

JSON **format**

```
{
  "RequestId": "22C0ACF0-DD29-4B67-9190-B7A48C*****"
}
```

Error codes

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

15.Account management

15.1. CreateAccount

Creates a database account for a PolarDB cluster.

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	CreateAccount	The operation that you want to perform. Set the value to CreateAccount .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
AccountName	String	Yes	testacc	The name of the account. The name must meet the following requirements: • It must start with a lowercase letter and end with a letter or a digit. • It can contain lowercase letters, digits, and underscores (_). • It must be 2 to 16 characters in length. • It cannot be root, admin, or another username that is reserved by the system.

Parameter	Type	Required	Example	Description
AccountPassword	String	Yes	Test1111	The password of the account. The password must meet the following requirements: - It must contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. - It must be 8 to 32 characters in length. - Special characters include <code>! @ # \$ % ^ & * () _ + - =</code>
AccountType	String	No	Normal	The type of the account. Valid values: Normal: a standard account Super: a privileged account  Note - If you leave this parameter empty, the default value Super is used. - If the database engine of the PolarDB cluster is PolarDB for Oracle or PolarDB for PostgreSQL, you can create multiple privileged accounts for the cluster. A privileged account is granted more permissions than a standard account. For more information about how to create a database account, see Create a database account. - If the database engine of the PolarDB cluster is PolarDB for MySQL, only one privileged account can be created for the cluster. A privileged account is granted more permissions than a standard account. For more information about how to create a database account, see Create a database account.

Parameter	Type	Required	Example	Description
AccountDescription	String	No	testdes	The description of the account. The description must meet the following requirements: • It cannot start with <code>http://</code> or <code>https://</code>. • It must be 2 to 256 characters in length.
DBName	String	No	testdb	The name of the database that can be accessed by the account. To enter multiple database names, separate the names with commas (,).  Note Only standard accounts of clusters that run the engine of PolarDB for MySQL support this parameter.

Parameter	Type	Required	Example	Description
AccountPrivilege	String	No	ReadWrite	The permissions that are granted to the account. Valid values: ReadWrite: read and write permissions ReadOnly: read-only permissions DMLOnly: The account is granted the permissions to execute only DML statements on the database. DDLOnly: The account is granted the permissions to execute only DDL statements on the database. ReadIndex: The account has the read and index permissions on the database.  Note - If you leave this parameter empty, the default value ReadWrite is used. - If multiple database names are specified by the <code>DBName</code> parameter, you must grant corresponding permissions on the databases. Separate multiple permissions with commas (.). For example, if you want to grant the account the read and write permissions on DB1 and the read-only permissions on DB2, set <code>DBName</code> to <code>DB1,DB2</code>, and set <code>AccountPrivilege</code> to <code>ReadWrite,ReadOnly</code>. - Only standard accounts of clusters that run the engine PolarDB for MySQL support this parameter.

Parameter	Type	Required	Example	Description
ClientToken	String	No	6000170000591aed949d0f54a343f1a4233c1e7d1c5c*****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length. The token is case-sensitive.

Response parameters

Parameter	Type	Example	Description
RequestId	String	CED079B7-A408-41A1-BFF1-EC608E*****	The ID of the request.

Examples

Sample requests

```
http(s)://polaradb.aliyuncs.com/?Action=CreateAccount
&AccountName=testacc
&AccountPassword=Test1111
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateAccountResponse>
<RequestId>CED079B7-A408-41A1-BFF1-EC608E*****</RequestId>
</CreateAccountResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "CED079B7-A408-41A1-BFF1-EC608E*****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDBCluster.NotFound	The DBClusterId provided does not exist in our records.	The error message returned because the specified DBClusterId does not exist in the current record.

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

15.2. CheckAccountName

Checks whether an account name is valid or unique in the cluster.

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	No	CheckAccountName	The operation that you want to perform. Set the value to CheckAccountName .
AccountName	String	Yes	test_acc	The name of the account.
DBClusterId	String	Yes	pc-*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query information about all clusters that are deployed in a specified region, such as the cluster ID.

Response parameters

Parameter	Type	Example	Description
RequestId	String	925B84D9-CA72-432C-95CF-738C22*****	The ID of the request.

- If the account name that you enter is invalid, the error message `Specified account name is not valid` is returned.
- If the account name that you enter exists in the cluster, the error message `The specified account name already exists` is returned.

Examples

Sample requests

```
http(s)://polaradb.aliyuncs.com/? Action=CheckAccountName
&AccountName=test_acc
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<CheckAccountNameResponse>
  <RequestId>925B84D9-CA72-432C-95CF-738C22*****</RequestId>
</CheckAccountNameResponse>
```

JSON format

```
{
  "RequestId": "925B84D9-CA72-432C-95CF-738C22*****"
}
```

Error codes

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

15.3. DescribeAccounts

Queries the details of a database account of a PolarDB cluster.

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	No	DescribeAccounts	The operation that you want to perform. Set the value to DescribeAccounts .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
AccountName	String	No	test_acc	The name of the account.
PageNumber	Integer	No	1	The number of the page to return. The value must be an integer that is larger than 0. Default value: 1.
PageSize	Integer	No	30	The number of entries to return on each page. Valid values: • 30 • 50 • 100 Default value: 30.

Response parameters

Parameter	Type	Example	Description
Accounts	Array of DBAccount		The details of the account.
AccountDescription	String	test	The description of the account.
AccountLockState	String	UnLock	The locking status of the account. Valid values: • UnLock • Lock
AccountName	String	test_acc	The name of the account.
AccountPasswordValidTime	String	undefined	The validity period of the password.

Parameter	Type	Example	Description
AccountStatus	String	Available	The status of the account. Valid values: • Creating: The account is being created. • Available: The account is available. • Deleting: The account is being deleted.
AccountType	String	Normal	The type of the database account. Valid values: • Normal: a standard account • Super: a privileged account
DatabasePrivileges	Array of DatabasePrivilege		The list of database permissions that are granted to the account.
AccountPrivilege	String	ReadOnly	The permissions of the database account.
DBName	String	DBtest	The name of the database.
PageNumber	Integer	1	The page number of the returned page.
PageRecordCount	Integer	1	The number of entries returned on the current page.
RequestId	String	155462B9-205F-4FFC-BB43-4855FE*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DescribeAccounts
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

`XML` format

```

<DescribeAccountsResponse>
  <PageRecordCount>1</PageRecordCount>
  <RequestId>155462B9-205F-4FFC-BB43-4855FE*****</RequestId>
  <PageNumber>1</PageNumber>
  <Accounts>
    <AccountDescription>test</AccountDescription>
    <AccountStatus>Available</AccountStatus>
    <AccountLockState>UnLock</AccountLockState>
    <AccountPasswordValidTime>undefined</AccountPasswordValidTime>
    <AccountType>Normal</AccountType>
    <AccountName>test_acc</AccountName>
  </Accounts>
  <Accounts>
    <DatabasePrivileges>
      <AccountPrivilege>ReadOnly</AccountPrivilege>
      <DBName>DBtest</DBName>
    </DatabasePrivileges>
  </Accounts>
</DescribeAccountsResponse>

```

JSON format

```

{
  "PageRecordCount": 1,
  "RequestId": "155462B9-205F-4FFC-BB43-4855FE*****",
  "PageNumber": 1,
  "Accounts": [
    {
      "AccountDescription": "test",
      "AccountStatus": "Available",
      "AccountLockState": "UnLock",
      "AccountPasswordValidTime": "undefined",
      "AccountType": "Normal",
      "AccountName": "test_acc"
    },
    {
      "DatabasePrivileges": {
        "AccountPrivilege": "ReadOnly",
        "DBName": "DBtest"
      }
    }
  ]
}

```

Error codes

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

15.4. ModifyAccountDescription

Modifies the description of a database account for a PolarDB cluster.

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	No	ModifyAccountDescription	The operation that you want to perform. Set the value to ModifyAccountDescription .
AccountDescription	String	Yes	test	The description of the account. The description must meet the following requirements: - The name cannot start with <code>http://</code> or <code>https://</code>. - The name must be 2 to 256 characters in length.
AccountName	String	Yes	testacc	The name of the account.
DBClusterId	String	Yes	pc-*****	The ID of the cluster.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2FED790E-FB61-4721-8C1C-07C627*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=ModifyAccountDescription
&AccountDescription=test
&AccountName=testacc
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyAccountDescriptionResponse>
  <RequestId>2FED790E-FB61-4721-8C1C-07C627*****</RequestId>
</ModifyAccountDescriptionResponse>
```

JSON format

```
{
  "RequestId": "2FED790E-FB61-4721-8C1C-07C627*****"
}
```

Error codes

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

15.5. GrantAccountPrivilege

Grants a standard account the permissions to access one or more databases in a specified PolarDB cluster.

Note

- A standard account can be granted the permissions to access one or more databases.
- If the specified account already has the access permissions on the specified databases, the operation returns a successful response.
- Before you call this operation, make sure that the cluster is in the Running state. Otherwise, the operation fails.
- The operation is applicable to only ApsaraDB PolarDB MySQL-compatible edition clusters.
- By default, a privileged account for a cluster has all the permissions on the databases in the cluster.

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	No	GrantAccountPrivilege	The operation that you want to perform. Set the value to GrantAccountPrivilege .
AccountName	String	Yes	testacc	The name of the account.

Parameter	Type	Required	Example	Description
AccountPrivilege	String	Yes	ReadWrite,ReadOnly	The account permission. Valid values: ReadWrite: The account has the read and write permissions on the databases. ReadOnly: The account has the read permissions on the databases. DMLOnly: The account has the permissions to execute only data manipulation language (DML) statements on the databases. DDLOnly: The account has the permissions to execute only data definition language (DDL) statements on the databases. ReadIndex: The account has the read and index permissions on the databases.  Note The number of AccountPrivilege values must be the same as the number of DBName values. Each account permission must correspond to a database name in sequence. For example, you can set DBName to <code>testdb_1,testdb_2</code> and set AccountPrivilege to <code>ReadWrite,ReadOnly</code>. In this case, the specified standard account is granted the read and write permissions on the testdb_1 database and the read permission on the testdb_2 database.
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster.
DBName	String	Yes	testdb_1,testdb_2	The names of the databases that the account can access. You can grant the access permissions on one or more databases to the specified standard account. If you need to specify multiple database names, separate the database names with commas (,).

Response parameters

Parameter	Type	Example	Description
RequestId	String	2FED790E-FB61-4721-8C1C-07C627*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=GrantAccountPrivilege
&AccountName=testacc
&AccountPrivilege=ReadWrite,ReadOnly
&DBClusterId=pc-*****
&DBName=testdb_1,testdb_2
&<Common request parameters>
```

Sample success responses

XML format

```
<GrantAccountPrivilegeResponse>
  <RequestId>2FED790E-FB61-4721-8C1C-07C627*****</RequestId>
</GrantAccountPrivilegeResponse>
```

JSON format

```
{
  "RequestId": "2FED790E-FB61-4721-8C1C-07C627*****"
}
```

Error codes

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

15.6. RevokeAccountPrivilege

Revokes the access permissions on one or more databases from a specified PolarDB standard account.

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
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Parameter	Type	Required	Example	Description
Action	String	No	RevokeAccountPrivilege	The operation that you want to perform. Set the value to RevokeAccountPrivilege .
AccountName	String	Yes	testacc	The name of the account.  Note You can specify only a standard account.
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster.
DBName	String	Yes	testdb	The names of the databases. If you need to specify multiple database names, separate the names with commas (,).

Response parameters

Parameter	Type	Example	Description
RequestId	String	2FED790E-FB61-4721-8C1C-07C627*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=RevokeAccountPrivilege
&AccountName=testacc
&DBClusterId=pc-*****
&DBName=testdb
&<Common request parameters>
```

Sample success responses

XML format

```
<RevokeAccountPrivilegeResponse>
  <RequestId>2FED790E-FB61-4721-8C1C-07C627*****</RequestId>
</RevokeAccountPrivilegeResponse>
```

JSON format


```
{
  "RequestId": "2FED790E-FB61-4721-8C1C-07C627*****"
}
```

Error codes

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

15.7. ResetAccount

Resets the permissions of a privileged account for a specified PolarDB cluster.

 **Note** Only ApsaraDB PolarDB MySQL-compatible edition clusters support this operation.

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	No	ResetAccount	The operation that you want to perform. Set the value to ResetAccount .
AccountName	String	Yes	testacc	The name of the account.  Note You can reset only the permissions of a privileged account.
AccountPassword	String	Yes	Pw123456	The password of the account. The password must meet the following requirements: - It must contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. - It must be 8 to 32 characters in length. - It can contain the following special characters: <code>!@#\$%^&*()_+~=</code>

Parameter	Type	Required	Example	Description
DBClusterId	String	Yes	pc-*****	The ID of the cluster.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2FED790E-FB61-4721-8C1C-07C627*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=ResetAccount
&AccountName=testacc
&AccountPassword=Pw123456
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<ResetAccountResponse>
  <RequestId>2FED790E-FB61-4721-8C1C-07C627*****</RequestId>
</ResetAccountResponse>
```

JSON format

```
{
  "RequestId": "2FED790E-FB61-4721-8C1C-07C627*****"
}
```

Error codes

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

15.8. DeleteAccount

Deletes a specified PolarDB database account.

 **Note** Before you call this operation, make sure that the cluster is in the Running state. Otherwise, the operation fails.

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	No	DeleteAccount	The operation that you want to perform. Set the value to DeleteAccount .
AccountName	String	Yes	testacc	The name of the account.
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2FED790E-FB61-4721-8C1C-07C627*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DeleteAccount
&AccountName=testacc
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteAccountResponse>
  <RequestId>2FED790E-FB61-4721-8C1C-07C627*****</RequestId>
</DeleteAccountResponse>
```

JSON format

```
{
  "RequestId": "2FED790E-FB61-4721-8C1C-07C627*****"
}
```

Error codes

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

15.9. ModifyAccountPassword

Changes the password of a database account for a specified PolarDB cluster.

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	No	ModifyAccountPassword	The operation that you want to perform. Set the value to ModifyAccountPassword .
AccountName	String	Yes	testacc	The name of the account.
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster.
NewAccountPassword	String	Yes	Pw123456	The new password of the account. The new password must meet the following requirements: - It must contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. - It must be 8 to 32 characters in length. - It can contain the following special characters: !@#\$%^&*()_+-=.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2FED790E-FB61-4721-8C1C-07C627*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=ModifyAccountPassword
&AccountName=testacc
&DBClusterId=pc-*****
&NewAccountPassword=Pw123456
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyAccountPasswordResponse>
  <RequestId>2FED790E-FB61-4721-8C1C-07C627*****</RequestId>
</ModifyAccountPasswordResponse>
```

JSON format

```
{
  "RequestId": "2FED790E-FB61-4721-8C1C-07C627*****"
}
```

Error codes

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

16.Database management

16.1. CreateDatabase

Creates a database for a PolarDB cluster.

Before you call this operation, make sure that the following requirements are met:

- The cluster is in the Running state.
- The cluster is unlocked.

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	CreateDatabase	The operation that you want to perform. Set the value to CreateDatabase .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
DBName	String	Yes	testDB	The name of the database. The name must meet the following requirements: • The name can contain lowercase letters, digits, hyphens (-), and underscores (_). • The name must start with a lowercase letter and end with a lowercase letter or a digit. The name must be 1 to 64 characters in length.  Note The name cannot be <code>test</code>, <code>mysql</code>, or another keyword that is reserved by the system.
CharacterSetName	String	Yes	utf8	The character set that is used by the cluster. For more information, see Character sets .

Parameter	Type	Required	Example	Description
DBDescription	String	No	testdesc	The description of the database. The description must meet the following requirements: - It cannot start with <code>http://</code> or <code>https://</code>. - It must be 2 to 256 characters in length. Note If databases in the cluster run the Oracle or PostgreSQL database engine, you must specify this parameter. If databases in the cluster run the MySQL database engine, you do not need to specify this parameter.
AccountName	String	No	testacc	The name of the account that is authorized to access the database. You can call the DescribeAccounts operation to query account information. Note - You can specify only a standard account. By default, privileged accounts have all permissions on all databases. You do not need to authorize the privileged accounts to access the database. - If databases in the cluster run the Oracle or PostgreSQL database engine, you must specify this parameter. If databases in the cluster run the MySQL database engine, you do not need to specify this parameter.

Parameter	Type	Required	Example	Description
AccountPrivilege	String	No	ReadWrite	The permissions that are granted to the account. Valid values: • ReadWrite: The account has the read and write permissions on the database. • ReadOnly: The account has the read-only permissions on the database. • DMLOnly: The account has the permissions only to execute DML statements on the database. • DDLOnly: The account has the permissions only to execute DDL statements on the database. If you leave this parameter empty, the default value ReadWrite is used.  Note • This parameter is valid only when the AccountName parameter is specified. • If databases in the cluster run the Oracle or PostgreSQL database engine, you must specify this parameter. If databases in the cluster run the MySQL database engine, you do not need to specify this parameter.

Parameter	Type	Required	Example	Description
Collate	String	No	C	The language that specifies the collation of the database that is to be created.  Note - The language must be compatible with the character set that is specified by the CharacterSetName parameter. - If databases in the cluster run the Oracle or PostgreSQL database engine, you must specify this parameter. If databases in the cluster run the MySQL database engine, you do not need to specify this parameter. The steps to view the valid values of this parameter: Log on to the PolarDB console and click the ID of a cluster. In the left-side navigation pane, choose Settings and Management > Databases. Click Create Database.
				The language that specifies the character type of the database.

Parameter	Type	Required	Example	Description
Ctype	String	No	C	 Note - The language must be compatible with the character set that is specified by the CharacterSetName parameter. - The specified value must be the same as that of the Collate parameter. - If databases in the cluster run the Oracle or PostgreSQL database engine, you must specify this parameter. If databases in the cluster run the MySQL database engine, you do not need to specify this parameter. The steps to view the valid values of this parameter: Log on to the PolarDB console and click the ID of a cluster. In the left-side navigation pane, choose Settings and Management > Databases. Click Create Database.

Response parameters

Parameter	Type	Example	Description
RequestId	String	93E98F25-BE02-40DA-83E3-F77F8D*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=CreateDatabase
&CharacterSetName=utf8
&DBClusterId=pc-*****
&DBName=testDB
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateDatabaseResponse>
  <RequestId>93E98F25-BE02-40DA-83E3-F77F8D*****</RequestId>
</CreateDatabaseResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "93E98F25-BE02-40DA-83E3-F77F8D*****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidDBName.Malformed	The specified parameter DBName is not valid.	The error message returned because the specified database name is not in the required format.
404	InvalidDBCluster.NotFound	The DBClusterId provided does not exist in our records.	The error message returned because the specified DBClusterId does not exist in the current record.

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

16.2. DescribeDatabases

Queries information about databases in a specified PolarDB cluster.

Debugging

Alibaba Cloud provides OpenAPI Explorer to simplify API usage. 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	DescribeDatabases	The operation that you want to perform. Set the value to DescribeDatabases .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
DBName	String	No	test_db	The name of the database that you want to query.  Note You can specify only one database.
PageNumber	Integer	No	1	The number of the page to return. The value must be a positive integer that does not exceed the maximum value of the INTEGER data type. Default value: 1.
PageSize	Integer	No	30	The number of entries to return on each page. Valid values: 30 50 100 Default value: 30.

Response parameters

Parameter	Type	Example	Description
PageRecordCount	Integer	1	The number of entries returned per page.
Databases	Array of Database		The information about databases.
Database			
DBDescription	String	test_des	The description of the database.

Parameter	Type	Example	Description
DBStatus	String	Running	The state of the database. Valid values: Creating: The database is being created. Running: The database is running. Deleting: The database is being deleted.
DBName	String	test_db	The name of the database.
Engine	String	MySQL	The engine that the database runs. Valid values: MySQL Oracle PostgreSQL
CharacterSetName	String	utf8mb4	The character set that the database uses. For more information, see Character set tables .
Accounts	Array of Account		The accounts that can be used to access the database.  Note If you run the MySQL database engine on the cluster, the cluster does not support privileged accounts.
Account			
PrivilegeStatus	String	Empowered	The authorization state of the account. Valid values: Empowering: The system is granting permissions to the account. Empowered: Permissions are granted to the account. Removing: The system is revoking permissions from the account.
AccountStatus	String	Available	The state of the account. Valid values: Creating: The account is being created. Available: The account is available. Deleting: The account is being deleted.

Parameter	Type	Example	Description
AccountPrivilege	String	ReadOnly	The permissions that are granted to the account. Valid values: ReadWrite: The account is granted the read and write permissions on the database. ReadOnly: The account is granted the read-only permissions on the database. DMLOnly: The account is granted the permissions to execute only DML statements on the database. DDLOnly: The account is granted the permissions to execute only DDL statements on the database. ReadIndex: The account has the read and index permissions on the database.
AccountName	String	test_acc	The username of the account.  Note If you run the MySQL database engine on the cluster, the cluster does not support privileged accounts.
RequestId	String	E1DF8CA6-2300-448B-9ABF-760C4B*****	The ID of the request.
PageNumber	Integer	1	The page number of the returned page.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeDatabases
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDatabasesResponse>
<PageRecordCount>1</PageRecordCount>
<Databases>
  <Database>
    <DBName>test_db</DBName>
    <CharacterSetName>utf8mb4</CharacterSetName>
    <DBStatus>Running</DBStatus>
    <Engine>MySQL</Engine>
    <DBDescription>test_des</DBDescription>
  </Database>
  <Database>
    <Accounts>
      <Account>
        <AccountStatus>Available</AccountStatus>
        <AccountPrivilege>ReadOnly</AccountPrivilege>
        <PrivilegeStatus>Empowered</PrivilegeStatus>
        <AccountName>test_acc</AccountName>
      </Account>
    </Accounts>
  </Database>
</Databases>
<RequestId>E1DF8CA6-2300-448B-9ABF-760C4B*****</RequestId>
<PageNumber>1</PageNumber>
</DescribeDatabasesResponse>
```

JSON **format**

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "PageRecordCount" : 1,
  "Databases" : {
    "Database" : [ {
      "DBName" : "test_db",
      "CharacterSetName" : "utf8mb4",
      "DBStatus" : "Running",
      "Engine" : "MySQL",
      "DBDescription" : "test_des"
    }, {
      "Accounts" : {
        "Account" : {
          "AccountStatus" : "Available",
          "AccountPrivilege" : "ReadOnly",
          "PrivilegeStatus" : "Empowered",
          "AccountName" : "test_acc"
        }
      }
    } ]
  },
  "RequestId" : "E1DF8CA6-2300-448B-9ABF-760C4B*****",
  "PageNumber" : 1
}
```

Error codes

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

16.3. ModifyDBDescription

Modifies the description of an Apsara PolarDB cluster.

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	No	ModifyDBDescription	The operation that you want to perform. Set the value to ModifyDBDescription .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.

Parameter	Type	Required	Example	Description
DBDescription	String	Yes	DBDesc	The description of the database. The description must meet the following requirements: - The description cannot start with <code>http://</code> or <code>https://</code>. - The description must be 2 to 256 characters in length.
DBName	String	Yes	testDB	The name of the database.

Response parameters

Parameter	Type	Example	Description
RequestId	String	5F295AAB-B599-4F0E-96D0-DBFAB3*****	The ID of the request.

Examples

Sample request

```
http(s)://polardb.aliyuncs.com/? Action=ModifyDBDescription
&DBClusterId=pc-*****
&DBDescription=DBDesc
&DBName=testDB
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDBDescriptionResponse>
  <RequestId>5F295AAB-B599-4F0E-96D0-DBFAB3*****</RequestId>
</ModifyDBDescriptionResponse>
```

JSON format

```
{
  "RequestId": "5F295AAB-B599-4F0E-96D0-DBFAB3*****"
}
```

Error codes

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

16.4. DescribeCharacterSetName

Queries character sets that ApsaraDB PolarDB MySQL-compatible edition databases support.

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	No	DescribeCharacterSetName	The operation that you want to perform. Set the value to DescribeCharacterSetName .
RegionId	String	Yes	cn-hangzhou	The ID of the region. Note You can call the DescribeRegions operation to query the available regions.
DBClusterId	String	No	pc-*****	The ID of the cluster. Note You can only query character sets that ApsaraDB PolarDB MySQL-compatible edition clusters support. If you enter the ID of a ApsaraDB PolarDB PostgreSQL-compatible edition or ApsaraDB PolarDB O Edition cluster, the returned value of <code>CharacterSetNameItems</code> is an empty string.

Response parameters

Parameter	Type	Example	Description
CharacterSetNameItems	List	"CharacterSetName": ["utf8mb4", "utf8", "armscii8"]	The character sets that ApsaraDB PolarDB MySQL-compatible edition databases support.
Engine	String	POLARDB	The engine of the cluster.

Parameter	Type	Example	Description
RequestId	String	34458CD3-33E0-4624-BFEF-840C15*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DescribeCharacterSetName
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeCharacterSetNameResponse>
  <RequestId>34458CD3-33E0-4624-BFEF-840C15*****</RequestId>
  <CharacterSetNameItems>
    <CharacterSetName>utf8mb4</CharacterSetName>
    <CharacterSetName>utf8</CharacterSetName>
    <CharacterSetName>utf32</CharacterSetName>
    <CharacterSetName>utf16le</CharacterSetName>
    <CharacterSetName>utf16</CharacterSetName>
    <CharacterSetName>ujis</CharacterSetName>
    <CharacterSetName>ucs2</CharacterSetName>
    <CharacterSetName>tis620</CharacterSetName>
    <CharacterSetName>swe7</CharacterSetName>
    <CharacterSetName>sjis</CharacterSetName>
    <CharacterSetName>macroman</CharacterSetName>
    <CharacterSetName>macce</CharacterSetName>
    <CharacterSetName>latin7</CharacterSetName>
    <CharacterSetName>latin5</CharacterSetName>
    <CharacterSetName>latin2</CharacterSetName>
    <CharacterSetName>latin1</CharacterSetName>
    <CharacterSetName>koi8u</CharacterSetName>
    <CharacterSetName>koi8r</CharacterSetName>
    <CharacterSetName>keybcs2</CharacterSetName>
    <CharacterSetName>hp8</CharacterSetName>
    <CharacterSetName>hebrew</CharacterSetName>
    <CharacterSetName>greek</CharacterSetName>
    <CharacterSetName>geostd8</CharacterSetName>
    <CharacterSetName>gbk</CharacterSetName>
    <CharacterSetName>gb2312</CharacterSetName>
    <CharacterSetName>euckr</CharacterSetName>
    <CharacterSetName>eucjpms</CharacterSetName>
    <CharacterSetName>dec8</CharacterSetName>
    <CharacterSetName>cp932</CharacterSetName>
    <CharacterSetName>cp866</CharacterSetName>
    <CharacterSetName>cp852</CharacterSetName>
    <CharacterSetName>cp850</CharacterSetName>
    <CharacterSetName>cp1257</CharacterSetName>
    <CharacterSetName>cp1256</CharacterSetName>
    <CharacterSetName>cp1251</CharacterSetName>
    <CharacterSetName>cp1250</CharacterSetName>
    <CharacterSetName>binary</CharacterSetName>
    <CharacterSetName>big5</CharacterSetName>
    <CharacterSetName>ascii</CharacterSetName>
    <CharacterSetName>armscii8</CharacterSetName>
  </CharacterSetNameItems>
  <Engine>POLARDB</Engine>
</DescribeCharacterSetNameResponse>
```

JSON **format**

```
{
  "RequestId": "34458CD3-33E0-4624-BFEF-840C15*****",
  "CharacterSetNameItems": {
    "CharacterSetName": [
      "utf8mb4",
      "utf8",
      "utf32",
      "utf16le",
      "utf16",
      "ujis",
      "ucs2",
      "tis620",
      "swe7",
      "sjis",
      "macroman",
      "macce",
      "latin7",
      "latin5",
      "latin2",
      "latin1",
      "koi8u",
      "koi8r",
      "keybcs2",
      "hp8",
      "hebrew",
      "greek",
      "geostd8",
      "gbk",
      "gb2312",
      "euckr",
      "eucjpms",
      "dec8",
      "cp932",
      "cp866",
      "cp852",
      "cp850",
      "cp1257",
      "cp1256",
      "cp1251",
      "cp1250",
      "binary",
      "big5",
      "ascii",
      "armscii8"
    ]
  },
  "Engine": "POLARDB"
}
```

Error codes

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

16.5. CheckDBName

Checks whether a database name is valid or unique in the cluster.

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	No	CheckDBName	The operation that you want to perform. Set the value to CheckDBName .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query information about all clusters that are deployed in a specified region, such as the cluster ID.
DBName	String	Yes	test_db	The name of the database.

Response parameters

Parameter	Type	Example	Description
RequestId	String	CDB3258F-B5DE-43C4-8935-CBA0CA*****	The ID of the request.

- If the database name that you enter is invalid, the error message `Specified DB name is not valid` is returned.
- If the database name that you enter exists in the cluster, the error message `Specified DB name already exists` is returned.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=CheckDBName
&DBClusterId=pc-*****
&DBName=test_db
&<Common request parameters>
```

Sample success responses

XML format

```
<CheckDBNameResponse>
  <RequestId>CDB3258F-B5DE-43C4-8935-CBA0CA*****</RequestId>
</CheckDBNameResponse>
```

JSON format

```
{
  "RequestId": "CDB3258F-B5DE-43C4-8935-CBA0CA*****"
}
```

Error codes

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

16.6. DeleteDatabase

Deletes a database from a specified PolarDB cluster.

Note

- The cluster must be in the Running state and unlocked. Otherwise, the specified database cannot be deleted.
- The delete operation is performed in an asynchronous manner. It may take a long time to delete a large database. A success response for this operation only indicates that the request to delete the database is sent. You must confirm that the database does not exist in the cluster to determine that the database has been deleted.

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	No	DeleteDatabase	The operation that you want to perform. Set the value to DeleteDatabase .

Parameter	Type	Required	Example	Description
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
DBName	String	Yes	testdb	The name of the database.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2FED790E-FB61-4721-8C1C-07C627*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DeleteDatabase
&DBClusterId=pc-*****
&DBName=testdb
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteDatabaseResponse>
  <RequestId>2FED790E-FB61-4721-8C1C-07C627*****</RequestId>
</DeleteDatabaseResponse>
```

JSON format

```
{
  "RequestId": "2FED790E-FB61-4721-8C1C-07C627*****"
}
```

Error codes

HttpCode	Error codes	Error message	Description
404	InvalidDBCluster.NotFound	The DBClusterId provided does not exist in our records.	The error message returned because the specified DBClusterId does not exist in the current record.

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

17.Global Database Network (GDN)

17.1. CreateGlobalDatabaseNetwork

Creates a Global Database Network (GDN).

 **Note** A cluster belongs to only one GDN.

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	No	CreateGlobalDatabaseNetwork	The operation that you want to perform. Set the value to CreateGlobalDatabaseNetwork .
RegionId	String	No	cn-hangzhou	The region ID of the cluster.
DBClusterId	String	Yes	pc-bp1q76364ird*****	The ID of the primary cluster.
GDNDescription	String	No	GDN-fortest	The description of the GDN.

Response parameters

Parameter	Type	Example	Description
GDNId	String	gd-m5ex5wqfqbou*****	The ID of the GDN.
RequestId	String	C61892A4-0850-4516-9E26-44D96C1782DE	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=CreateGlobalDatabaseNetwork
&DBClusterId=pc-bplq76364ird*****
&GDNDescription=gdn-bplfttxsrmv*****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateGlobalDatabaseNetworkResponse>
  <GDNId>gd-m5ex5wqfqbou*****</GDNId>
  <RequestId>C61892A4-0850-4516-9E26-44D96C1782DE</RequestId>
</CreateGlobalDatabaseNetworkResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "GDNId" : "gd-m5ex5wqfqbou*****",
  "RequestId" : "C61892A4-0850-4516-9E26-44D96C1782DE"
}
```

Error codes

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

17.2. DeleteGlobalDatabaseNetwork

Deletes a Global Database Network (GDN).

 **Note** You are allowed to delete a GDN that includes only one primary cluster.

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	No	DeleteGlobalDatabaseNetwork	The operation that you want to perform. Set the value to DeleteGlobalDatabaseNetwork .

Parameter	Type	Required	Example	Description
RegionId	String	No	cn-hangzhou	The region ID of the cluster.
GDNId	String	Yes	gdn-bp1fttxsrmv*****	The ID of the GDN.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C61892A4-0850-4516-9E26-44D96C1782DE	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DeleteGlobalDatabaseNetwork
&GDNId=gdn-bp1fttxsrmv*****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeleteGlobalDatabaseNetworkResponse>
  <RequestId>C61892A4-0850-4516-9E26-44D96C1782DE</RequestId>
</DeleteGlobalDatabaseNetworkResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "C61892A4-0850-4516-9E26-44D96C1782DE"
}
```

Error codes

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

17.3. DescribeGlobalDatabaseNetwork

Views the details about a Global Database Network (GDN).

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	No	DescribeGlobalDatabaseNetwork	The operation that you want to perform. Set the value to DescribeGlobalDatabaseNetwork .
RegionId	String	No	cn-qingdao	The region ID of the cluster.
GDNId	String	Yes	gdn-bp1fttxsrmv*****	The ID of the GDN.

Response parameters

Parameter	Type	Example	Description
GDNStatus	String	active	The status of the GDN. Valid values: • Creating: The GDN is being created. • active: The GDN is running. • deleting: The GDN is being deleted. • locked: The GDN is locked. If the GDN is locked, you cannot perform operations on clusters in the GDN. • removing_member: The secondary cluster is being removed from the GDN.
Connections	Array of Connection		The information about the connection to the cluster.
ConnectionString	String	abc.polardb.rds.aliyuncs.com	The endpoint of the cluster.
NetType	String	Private	The network type of the cluster.
Port	String	3306	The port number of the cluster endpoint.
DBVersion	String	8.0	The version of the database engine. Only version 8.0 is supported.

Parameter	Type	Example	Description
RequestId	String	67F2E75F-AE67-4FB2-821F-A81237EACD15	The ID of the request.
GDNId	String	gdn-bp1fttxsrmv*****	The ID of the GDN.
CreateTime	String	2020-02-24T11:57:54Z	The time at which the GDN was created.
DBType	String	MySQL	The type of the database engine. Only MySQL is supported.
GDNDescription	String	GDN-forrest	The description of the GDN.
DBClusters	Array of DBCluster		The clusters that are included in the GDN. A maximum of 16 clusters are allowed.
ReplicaLag	String	1	The latency of cross-region data replication between the primary cluster and secondary clusters. Unit: seconds.
ExpireTime	String	2020-11-14T16:00:00Z	The time at which the cluster expires.  Note Expiration time is returned only for clusters that use the subscription billing method. An empty string is returned for clusters that use the pay-as-you-go billing method.
Expired	String	false	Indicates whether the cluster has expired. Valid values: true: The cluster has expired. false: The cluster has not expired.  Note This parameter is returned only for clusters that use the subscription billing method.
DBNodeClass	String	polar.mysql.x4.large	The instance type of the node.

Parameter	Type	Example	Description
PayType	String	Prepaid	The billing method of the cluster. Valid values: Postpaid: the pay-as-you-go billing method Prepaid: the subscription billing method
DBType	String	MySQL	The type of the database engine. Only MySQL is supported.
RegionId	String	cn-hangzhou	The region ID of the cluster.
DBVersion	String	8.0	The version of the database engine. Only version 8.0 is supported.
DBClusterId	String	pc-wz9fb5nn44u1d****	The ID of the cluster in the GDN.
DBClusterStatus	String	Running	The status of the cluster in the GDN. For more information, see the Cluster status table .
StorageUsed	String	3012558848	The storage space consumed by the cluster. Unit: bytes.
DBClusterDescription	String	test	The description of the cluster.
Role	String	primary	The role of the cluster. Valid values: Primary: the primary cluster standby: the secondary cluster  Note A GDN consists of one primary cluster and up to four secondary clusters.
DBNodes	Array of DBNode		The information about the node.
DBNodeClass	String	polar.mysql.x4.large	The instance type of the node.
ZoneId	String	cn-hangzhou-i	The ID of the zone.

Parameter	Type	Example	Description
CreationTime	String	2020-03-23T21:35:43Z	The time when the node was created.
DBNodeRole	String	Reader	The role of the node. Valid values: Writer: The node is the primary node. Reader: The node is a read-only node.
DBNodeStatus	String	Running	The status of the node. Valid values: Creating: The cluster is being created. Running: The cluster is running. Deleting: The cluster is being deleted. Rebooting: The cluster is restarting. DBNodeCreating: The node is being added. DBNodeDeleting: The node is being deleted. ClassChanging: The instance type of the node is being changed. NetAddressCreating: The network connection is being created. NetAddressDeleting: The network connection is being deleted. NetAddressModifying: The network connection is being modified. MinorVersionUpgrading: The minor version is being updated. Maintaining: The cluster is being maintained. Switching: A failover is being performed.
FailoverPriority	Integer	1	The failover priority. Each node is assigned a failover priority. If a failover occurs, a node can be selected as a primary node. The priority determines the probability at which a node is selected as a primary node. A larger value indicates a higher priority. Valid values: 1 to 15.
MaxConnections	Integer	8000	The maximum number of concurrent connections to the cluster.
MaxIOPS	Integer	32000	The maximum number of IOPS.

Parameter	Type	Example	Description
DBNodeId	String	pi-*****	The ID of the node.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeGlobalDatabaseNetwork
&GDNId=gdn-bplfttxsrmv*****
&<Common request parameters>
```

Sample success responses

`XML` format


```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeGlobalDatabaseNetworkResponse>
  <GDNStatus>active</GDNStatus>
  <Connections>
    <ConnectionString>abc.polardb.rds.aliyuncs.com</ConnectionString>
    <NetType>Private</NetType>
    <Port>3306</Port>
  </Connections>
  <DBVersion>8.0</DBVersion>
  <RequestId>67F2E75F-AE67-4FB2-821F-A81237EACD15</RequestId>
  <GDNId>gdn-bplfttxsrmv*****</GDNId>
  <CreateTime>2020-02-24T11:57:54Z</CreateTime>
  <DBType>MySQL</DBType>
  <GDNDescription>GDN-fortest</GDNDescription>
  <DBClusters>
    <ReplicaLag>1</ReplicaLag>
    <ExpireTime>2020-11-14T16:00:00Z</ExpireTime>
    <Expired>false</Expired>
    <DBNodeClass>polar.mysql.x4.large</DBNodeClass>
    <PayType>Prepaid</PayType>
    <DBType>MySQL</DBType>
    <RegionId>cn-hangzhou</RegionId>
    <DBVersion>8.0</DBVersion>
    <DBClusterId>pc-wz9fb5nn44uld****</DBClusterId>
    <DBClusterStatus>Running</DBClusterStatus>
    <StorageUsed>3012558848</StorageUsed>
    <DBClusterDescription>test</DBClusterDescription>
    <Role>primary</Role>
    <DBNodes>
      <DBNodeClass>polar.mysql.x4.large</DBNodeClass>
      <ZoneId>cn-hangzhou-i</ZoneId>
      <CreationTime>2020-03-23T21:35:43Z</CreationTime>
      <DBNodeRole>Reader</DBNodeRole>
      <DBNodeStatus>Running</DBNodeStatus>
      <FailoverPriority>1</FailoverPriority>
      <MaxConnections>8000</MaxConnections>
      <MaxIOPS>32000</MaxIOPS>
      <DBNodeId>pi-*****</DBNodeId>
    </DBNodes>
  </DBClusters>
</DescribeGlobalDatabaseNetworkResponse>
```

JSON **format**

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "GDNStatus" : "active",
  "Connections" : [ {
    "ConnectionString" : "abc.polardb.rds.aliyuncs.com",
    "NetType" : "Private",
    "Port" : "3306"
  } ],
  "DBVersion" : "8.0",
  "RequestId" : "67F2E75F-AE67-4FB2-821F-A81237EACD15",
  "GDNId" : "gdn-bp1fttxsrmv*****",
  "CreateTime" : "2020-02-24T11:57:54Z",
  "DBType" : "MySQL",
  "GDNDescription" : "GDN-fortest",
  "DBClusters" : [ {
    "ReplicaLag" : "1",
    "ExpireTime" : "2020-11-14T16:00:00Z",
    "Expired" : "false",
    "DBNodeClass" : "polar.mysql.x4.large",
    "PayType" : "Prepaid",
    "DBType" : "MySQL",
    "RegionId" : "cn-hangzhou",
    "DBVersion" : "8.0",
    "DBClusterId" : "pc-wz9fb5nn44uld****",
    "DBClusterStatus" : "Running",
    "StorageUsed" : "3012558848",
    "DBClusterDescription" : "test",
    "Role" : "primary",
    "DBNodes" : [ {
      "DBNodeClass" : "polar.mysql.x4.large",
      "ZoneId" : "cn-hangzhou-i",
      "CreationTime" : "2020-03-23T21:35:43Z",
      "DBNodeRole" : "Reader",
      "DBNodeStatus" : "Running",
      "FailoverPriority" : 1,
      "MaxConnections" : 8000,
      "MaxIOPS" : 32000,
      "DBNodeId" : "pi-*****"
    } ]
  } ]
}

```

Error codes

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

17.4. DescribeGlobalDatabaseNetworks

Queries the details of all global database networks (GDNs) for an Alibaba Cloud account.

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	No	DescribeGlobalDatabaseNetworks	The operation that you want to perform. Set the value to DescribeGlobalDatabaseNetworks .
RegionId	String	No	cn-hangzhou	The region ID of the cluster.  Note You can call the DescribeRegions operation to query the region information of all clusters within a specified account.
DBClusterId	String	No	pc-*****	The ID of the PolarDB cluster.  Note You can call the DescribeDBClusters operation to query information of all clusters that are deployed in a specified region, such as the cluster ID.
PageSize	Integer	No	30	The number of entries to return on each page.
PageNumber	Integer	No	1	The number of the page to return.

Response parameters

Parameter	Type	Example	Description
TotalRecordCount	Integer	1	The total number of records that were returned.
PageRecordCount	Integer	30	The number of records on the current page.

Parameter	Type	Example	Description
RequestId	String	69A85BAF-1089-4CDF-A82F-0A140F*****	The ID of the request.
PageNumber	Integer	1	The page number of the returned page.
Items	Array of GlobalDatabaseNetwork		The GDN details.
DBVersion	String	8.0	The version number of the database engine. Only the 8.0 version is supported.
GDNId	String	gdn-*****	The ID of the GDN.
CreateTime	String	2020-03-23T05:46:54Z	The time when the GDN was created. The time is in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time is displayed in UTC.
GDNStatus	String	active	The status of the GDN. Valid values: Creating: The GDN is being created. active: The GDN is running. Deleting: The GDN is being deleted. locked: The GDN is locked. If the GDN is locked, you cannot perform operations on clusters in the GDN. removing_member: The secondary cluster is being removed from the GDN.
DBClusters	Array of DBCluster		The details of each cluster in the GDN.
DBClusterId	String	pc-*****	The ID of the PolarDB cluster.
Role	String	primary	The role of the cluster. Valid values: Primary: the primary cluster standby: the secondary cluster  Note A GDN consists of one primary cluster and up to four secondary clusters. For more information, see GDN.

Parameter	Type	Example	Description
RegionId	String	cn-hangzhou	The region ID of the cluster.
DBType	String	MySQL	The type of the database engine. Only MySQL is supported.
GDNDescription	String	test	The description of the GDN.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeGlobalDatabaseNetworks
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeGlobalDatabaseNetworksResponse>
<TotalRecordCount>1</TotalRecordCount>
<PageRecordCount>30</PageRecordCount>
<RequestId>69A85BAF-1089-4CDF-A82F-0A140F*****</RequestId>
<PageNumber>1</PageNumber>
<Items>
  <GDNStatus>active</GDNStatus>
  <DBVersion>8.0</DBVersion>
  <GDNId>gdn-*****</GDNId>
  <CreateTime>2020-03-23T05:46:54Z</CreateTime>
  <GDNDescription>test</GDNDescription>
  <DBType>MySQL</DBType>
  <DBClusters>
    <Role>primary</Role>
    <DBClusterId>pc-*****</DBClusterId>
    <RegionId>cn-hangzhou</RegionId>
  </DBClusters>
  <DBClusters>
    <Role>standby</Role>
    <DBClusterId>pc-*****</DBClusterId>
    <RegionId>cn-shanghai</RegionId>
  </DBClusters>
</Items>
</DescribeGlobalDatabaseNetworksResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalRecordCount" : 1,
  "PageRecordCount" : 30,
  "RequestId" : "69A85BAF-1089-4CDF-A82F-0A140F*****",
  "PageNumber" : 1,
  "Items" : [ {
    "GDNStatus" : "active",
    "DBVersion" : "8.0",
    "GDNId" : "gdn-*****",
    "CreateTime" : "2020-03-23T05:46:54Z",
    "GDNDescription" : "test",
    "DBType" : "MySQL",
    "DBClusters" : [ {
      "Role" : "primary",
      "DBClusterId" : "pc-*****",
      "RegionId" : "cn-hangzhou"
    }, {
      "Role" : "standby",
      "DBClusterId" : "pc-*****",
      "RegionId" : "cn-shanghai"
    } ]
  } ]
}
```

Error codes

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

17.5. ModifyGlobalDatabaseNetwork

Modifies a Global Database Network (GDN).

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	No	ModifyGlobalDatabaseNetwork	The operation that you want to perform. Set the value to ModifyGlobalDatabaseNetwork .
RegionId	String	No	cn-hangzhou	The region ID of the cluster.

Parameter	Type	Required	Example	Description
GDNId	String	Yes	gdn-bp1fttxsrmv*****	The ID of the GDN.
GDNDescription	String	Yes	GDN-fortest	The description of the GDN.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C61892A4-0850-4516-9E26-44D96C1782DE	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=ModifyGlobalDatabaseNetwork
&GDNId=gdn-bp1fttxsrmv*****
&GDNDescription=GDN-fortest
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyGlobalDatabaseNetworkResponse>
  <RequestId>C61892A4-0850-4516-9E26-44D96C1782DE</RequestId>
</ModifyGlobalDatabaseNetworkResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "C61892A4-0850-4516-9E26-44D96C1782DE"
}
```

Error codes

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

17.6. RemoveDBClusterFromGDN

Removes secondary clusters from a Global Database Network (GDN).

 **Note** You cannot remove the primary cluster from a GDN.

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	RemoveDBClusterFromGDN	The operation that you want to perform. Set the value to RemoveDBClusterFromGDN .
RegionId	String	No	cn-qingdao	The region ID of the cluster.
DBClusterId	String	Yes	pc-wz9fb5nn44u1d***	The ID of the cluster in the GDN.  Note You can call the DescribeGlobalDatabaseNetwork operation to view the ID of the cluster in the GDN.
GDNId	String	Yes	gdn-bp1fttxsrmv*****	The ID of the GDN.

Response parameters

Parameter	Type	Example	Description
RequestId	String	67F2E75F-AE67-4FB2-821F-A81237EACD15	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=RemoveDBClusterFromGDN
&DBClusterId=pc-wz9fb5nn44u1d***
&GDNId=gdn-bp1fttxsrmv*****
&Common request parameters
```

Sample success responses

 **format**


```
HTTP/1.1 200 OK
Content-Type:application/xml
<RemoveDBClusterFromGDNResponse>
  <RequestId>67F2E75F-AE67-4FB2-821F-A81237EACD15</RequestId>
</RemoveDBClusterFromGDNResponse>
```

JSON **format**

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "67F2E75F-AE67-4FB2-821F-A81237EACD15"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDBCluster.NotFound	The DBClusterId provided does not exist in our records.	The error message returned because the specified DBClusterId does not exist in the current record.

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

18.Backup management

18.1. CreateBackup

Creates a full snapshot backup for a specified PolarDB cluster.

Note

- You can manually create up to three backups for each cluster.
- The error message `Exceeding the daily backup times of this DB cluster` indicates that three manual backups already exist in your cluster. You must **delete a backup** before you call this operation to manually create backups.
- After you call this operation, a backup task is created in the backend. The task may be time-consuming if you want to back up large amounts of data.

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	No	CreateBackup	The operation that you want to perform. Set the value to CreateBackup .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
ClientToken	String	No	6000170000591a ed949d0f54a343f 1a4233c1e7d1c5c *****	The client token that is used to ensure the idempotency of requests. If an API operation is idempotent, the API operation returns the same result for identical requests. You can use the client to generate the value. Make sure that the value is unique for different requests. The token is case-sensitive. It can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
-----------	------	---------	-------------

Parameter	Type	Example	Description
BackupJobId	String	11111111	The ID of the backup set.
RequestId	String	F3322AFE-083E-4D77-A074-421301*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=CreateBackup
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateBackupResponse>
  <RequestId>F3322AFE-083E-4D77-A074-421301*****</RequestId>
  <BackupJobId>11111111</BackupJobId>
</CreateBackupResponse>
```

JSON format

```
{
  "RequestId": "F3322AFE-083E-4D77-A074-421301*****",
  "BackupJobId": 11111111
}
```

Error codes

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

18.2. DescribeBackups

Queries the backup details of an Apsara PolarDB cluster.

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
-----------	------	----------	---------	-------------

Parameter	Type	Required	Example	Description
Action	String	No	DescribeBackups	The operation that you want to perform. Set the value to DescribeBackups.
DBClusterId	String	Yes	pc-*****	The ID of the Apsara PolarDB cluster.
EndTime	String	Yes	2020-05-02T00:00Z	The end time of the query. The time must be in UTC. The format is <code>YYYY-MM-DDThh:mmZ</code>.  Note The end time must be later than the start time.
StartTime	String	Yes	2020-05-01T00:00Z	The start time of the query. The time must be in UTC. The format is <code>YYYY-MM-DDThh:mmZ</code>.
BackupId	String	No	61*****	The ID of the backup set.
BackupStatus	String	No	Success	The status of the backup task. Valid values: - Success: The backup task is successful. - Failed: The backup task fails.
BackupMode	String	No	Manual	The backup policy. Valid values: - Automated: automatic backup - Manual: manual backup
PageSize	Integer	No	30	The number of entries to return on each page. Default value: 30. Valid values: 30 50 100

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

Response parameters

Parameter	Type	Example	Description
Items	Array		The details of the backup set.
Backup			
BackupEndTime	String	2020-05-01T22:56:43Z	The end time of the backup. The time is displayed in UTC.
BackupId	String	61*****	The ID of the backup set.
BackupMethod	String	Snapshot	The backup method. Only snapshot backups are supported. The value of this parameter is Snapshot.
BackupMode	String	Automated	The backup policy. Valid values: - Automated: automatic backup - Manual: manual backup
BackupSetSize	String	154920107	The size of the backup file. Unit: bytes.  Note After you delete the target snapshot backups, the storage space consumed by the backups is released. The released storage space is smaller than the size of the backup file, because the snapshots share certain data blocks.
BackupStartTime	String	2020-05-01T22:56:28Z	The start time of the backup. The time is displayed in UTC.
BackupStatus	String	Success	The status of the backup task. Valid values: - Success: The backup task is successful. - Failed: The backup task fails.

Parameter	Type	Example	Description
BackupType	String	FullBackup	The type of the backup. Only full backups are supported. The value of this parameter is FullBackup.
BackupsLevel	String	Level-2	The level of the backup set. Valid values: - Level-1: level-1 backup set - Level-2: level-2 backup set
ConsistentTime	String	1589418586	The snapshot checkpoint time. The value is a Unix timestamp.
DBClusterId	String	pc-*****	The ID of the cluster.
IsAvail	String	0	Indicates whether the backup set is available. Valid values: 0: unavailable 1: available
StoreStatus	String	Disabled	Indicates whether the backup set can be deleted. Valid values: - Enabled: The backup set can be deleted. - Disabled: The backup set cannot be deleted.
PageNumber	String	1	The page number of the returned page.
PageRecordCount	String	1	The number of entries returned on the current page.
RequestId	String	EAF5BFA9-78FD-486B-9C76-DF292*****	The ID of the request.
TotalRecordCount	String	1	The total number of entries that were returned.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DescribeBackups
&DBClusterId=pc-*****
&EndTime=2020-05-02T00:00Z
&StartTime=2020-05-01T00:00Z
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeBackupsResponse>
  <TotalRecordCount>1</TotalRecordCount>
  <PageRecordCount>1</PageRecordCount>
  <RequestId>24A1990B-4F6E-482B-B8CB-75C612*****</RequestId>
  <PageNumber>1</PageNumber>
  <Items>
    <Backup>
      <BackupMethod>Snapshot</BackupMethod>
      <BackupMode>Automated</BackupMode>
      <BackupsLevel>Level-1</BackupsLevel>
      <DBClusterId>pc-*****</DBClusterId>
      <BackupId>111111111</BackupId>
      <IsAvail>1</IsAvail>
      <BackupSetSize>4639948800</BackupSetSize>
      <StoreStatus>Disabled</StoreStatus>
      <BackupEndTime>2020-11-15T07:30:20Z</BackupEndTime>
      <BackupStartTime>2020-11-15T07:30:05Z</BackupStartTime>
      <ConsistentTime>1605425407</ConsistentTime>
      <BackupType>FullBackup</BackupType>
      <BackupStatus>Success</BackupStatus>
    </Backup>
  </Items>
</DescribeBackupsResponse>
```

JSON format

```
{
  "TotalRecordCount": 1,
  "PageRecordCount": 1,
  "RequestId": "EAF5BFA9-78FD-486B-9C76-DF292*****",
  "PageNumber": 1,
  "Items": {
    "Backup": [
      {
        "BackupMethod": "Snapshot",
        "BackupMode": "Automated",
        "BackupsLevel": "Level-2",
        "DBClusterId": "pc-*****",
        "BackupId": "61*****",
        "IsAvail": 1,
        "BackupSetSize": 154920107,
        "StoreStatus": "Disabled",
        "BackupEndTime": "2020-05-01T22:56:43Z",
        "BackupStartTime": "2020-05-01T22:56:28Z",
        "ConsistentTime": 1588373790,
        "BackupType": "FullBackup",
        "BackupStatus": "Success"
      }
    ]
  }
}
```

Error codes

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

18.3. DescribeBackupTasks

Queries the backup tasks of a specific PolarDB cluster.

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	No	DescribeBackupTasks	The operation that you want to perform. Set the value to DescribeBackupTasks .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.

Parameter	Type	Required	Example	Description
BackupJobId	String	No	11111111	The ID of the backup task.
BackupMode	String	No	Manual	The backup mode. Valid values: Automated: automatic backup Manual: manual backup

Response parameters

Parameter	Type	Example	Description
Items	Array of BackupJob		The details of the backup task.
BackupJob			
BackupJobId	String	11111111	The ID of the backup task.
BackupProgress Status	String	NoStart	The status of the backup task. Valid values: NoStart: The backup task has not been started. Preparing: The backup task is in the preparing phase. Waiting: The backup task is waiting to be started. Uploading: The backup task is uploading the backup file. Checking: The backup task is checking the uploaded backup file. Finished: The backup task is completed.
JobMode	String	Automated	The backup mode. Valid values: Automated: automatic backup Manual: manual backup
Process	String	0	The progress percentage of the backup task.
StartTime	String	2020-08-08T07:24:01Z	The time when the backup task started. The time follows the ISO 8601 standard in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time is displayed in UTC.

Parameter	Type	Example	Description
TaskAction	String	NormalBackupTask	The type of the backup task. Valid values: TempBackupTask: The backup task is a temporary backup task. NormalBackupTask: The backup task is a common backup task.
RequestId	String	FA8C1EF1-E3D4-44D7-B809-823187*****	The ID of the request.

Examples

Sample request

```
http(s)://polardb.aliyuncs.com/? Action=DescribeBackupTasks
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeBackupTasksResponse>
  <RequestId>FA8C1EF1-E3D4-44D7-B809-823187*****</RequestId>
  <Items>
    <BackupJob>
      <JobMode>Automated</JobMode>
      <TaskAction>NormalBackupTask</TaskAction>
      <StartTime>2020-08-08T07:24:01Z</StartTime>
      <BackupProgressStatus>NoStart</BackupProgressStatus>
      <Process>0</Process>
      <BackupJobId>11111111</BackupJobId>
    </BackupJob>
  </Items>
</DescribeBackupTasksResponse>
```

JSON format

```
{
  "RequestId": "FA8C1EF1-E3D4-44D7-B809-823187*****",
  "Items": {
    "BackupJob": [
      {
        "JobMode": "Automated",
        "TaskAction": "NormalBackupTask",
        "StartTime": "2020-08-08T07:24:01Z",
        "BackupProgressStatus": "NoStart",
        "Process": "0",
        "BackupJobId": 11111111
      }
    ]
  }
}
```

Error codes

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

18.4. DescribeBackupLogs

You can call this operation to query backup logs and the URLs for downloading backup logs.

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	No	DescribeBackupLogs	The operation that you want to perform. Set the value to DescribeBackupLogs .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
EndTime	String	Yes	2020-02-12T15:00Z	The end of the time range to query. The end time must be later than the start time. Specify the time in the <code>YYYY-MM-DDThh:mmZ</code> format. The time must be in UTC.

Parameter	Type	Required	Example	Description
StartTime	String	Yes	2020-02-01T15:00Z	The beginning of the time range to query. Specify the time in the <code>YYYY-MM-DDThh:mmZ</code> format. The time must be in UTC.
PageSize	Integer	No	30	The number of entries to return on each page. Valid values: 30 50 100 Default value: 30
PageNumber	Integer	No	1	The number of the page to return. The value must be an integer that is larger than 0. Default value: 1.

Response parameters

Parameter	Type	Example	Description
TotalRecordCount	String	2	The total number of entries returned.
RequestId	String	ADAC63DB-0691-4ECE-949A-FAEA68*****	The ID of the request.
PageNumber	String	1	The page number of the page returned.
Items	Array of BackupLog		The details of the backup log.
BackupLog			
BackupLogEndTime	String	2020-02-12T03:55:31Z	The time when the backup log ended. The time follows the ISO 8601 standard in the <code>YYYY-MM-DD'T'HH:mm:ssZ</code> format. The time is displayed in UTC.
BackupLogId	String	1111111111	The ID of the backup log.
BackupLogName	String	ib_logfile1	The name of the backup log.

Parameter	Type	Example	Description
BackupLogSize	String	1073741824	The size of the backup log. Unit: bytes.
BackupLogStartTime	String	2020-02-12T03:54:43Z	The time when the backup task started. The time follows the ISO 8601 standard in the <code>YYYY-MM-DD'T'HH:mm:ssZ</code> format. The time is displayed in UTC.
DownloadLink	String	<code>http://*****.oss-cn-hangzhou.aliyuncs.com</code>	The public URL to download the backup log.
IntranetDownloadLink	String	<code>http://*****.oss-cn-hangzhou-internal.aliyuncs.com</code>	The internal URL to download the backup log.
LinkExpiredTime	String	2020-02-14T08:40:50Z	The time when the download URL expires.
PageRecordCount	String	2	The number of entries returned per page.

Examples

Sample request

```
http(s)://polardb.aliyuncs.com/? Action=DescribeBackupLogs
&DBClusterId=pc-*****
&EndTime=2020-02-12T15:00Z
&StartTime=2020-02-01T15:00Z
&<Common request parameters>
```

Sample success responses

`XML` format

```

<DescribeBackupLogsResponse>
  <TotalRecordCount>2</TotalRecordCount>
  <PageRecordCount>2</PageRecordCount>
  <RequestId>ADAC63DB-0691-4ECE-949A-FAEA68*****</RequestId>
  <PageNumber>1</PageNumber>
  <Items>
    <BackupLog>
      <DownloadLink>http://*****.oss-cn-hangzhou.aliyuncs.com</DownloadLink>
      <BackupLogEndTime>2020-02-12T03:55:31Z</BackupLogEndTime>
      <BackupLogId>1111111111</BackupLogId>
      <BackupLogName>ib_logfile1</BackupLogName>
      <LinkExpiredTime>2020-02-14T08:40:50Z</LinkExpiredTime>
      <BackupLogSize>1073741824</BackupLogSize>
      <IntranetDownloadLink>http://*****.oss-cn-hangzhou-internal.aliyuncs.co
m</IntranetDownloadLink>
      <BackupLogStartTime>2020-02-12T03:54:43Z</BackupLogStartTime>
    </BackupLog>
  </Items>
</DescribeBackupLogsResponse>

```

JSON format

```

{
  "TotalRecordCount": 2,
  "PageRecordCount": 2,
  "RequestId": "ADAC63DB-0691-4ECE-949A-FAEA68*****",
  "PageNumber": 1,
  "Items": {
    "BackupLog": [
      {
        "DownloadLink": "http://*****.oss-cn-hangzhou.aliyuncs.com",
        "BackupLogEndTime": "2020-02-12T03:55:31Z",
        "BackupLogId": 1111111111,
        "BackupLogName": "ib_logfile1",
        "LinkExpiredTime": "2020-02-14T08:40:50Z",
        "BackupLogSize": 1073741824,
        "IntranetDownloadLink": "http://*****.oss-cn-hangzhou-internal.aliyuncs.com",
        "BackupLogStartTime": "2020-02-12T03:54:43Z"
      }
    ]
  }
}

```

Error codes

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

18.5. DescribeDetachedBackups

Queries the backup set details of an Apsara PolarDB cluster that has been deleted.

Before you call this operation, make sure that the Apsara PolarDB cluster is in the **Released** state. Another prerequisite is that the **Retain All Backups Permanently** or **Retain Last Automatic Backup Permanently** backup retention policy takes effect after you delete the cluster. If you delete all backup sets after the cluster is deleted, you cannot use this API operation to retrieve the cluster.

 **Note** You can call the [DescribeDBClusterAttribute](#) operation to query the cluster status.

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	No	DescribeDetachedBackups	The operation that you want to perform. Set the value to DescribeDetachedBackups .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
EndTime	String	Yes	2020-05-14T00:00Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the <code>YYYY-MM-DDThh:mmZ</code> format. The time must be in UTC.
StartTime	String	Yes	2020-05-01T00:00Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the <code>YYYY-MM-DDThh:mmZ</code> format. The time must be in UTC.
BackupId	String	No	11111111	The ID of the backup.
BackupStatus	String	No	Success	The status of the backup task. Valid values: Success: The backup task is completed. Failed: The backup task failed.

Parameter	Type	Required	Example	Description
BackupMode	String	No	Manual	The backup mode. Valid values: • Automated: automatic backup • Manual: manual backup
PageSize	Integer	No	30	The number of entries to return on each page. Valid values: • 30 • 50 • 100 Default value: 30.
PageNumber	Integer	No	1	The number of the page to return. The value must be an integer that is larger than 0. Default value: 1.

Response parameters

Parameter	Type	Example	Description
Items	Array of Backup		The details of the backup set.
Backup			
BackupEndTime	String	2020-05-12T03:25:55Z	The time when this backup task ended. The time is displayed in UTC.
BackupId	String	111111111	The ID of the backup.
BackupMethod	String	Snapshot	The backup method. Only snapshot backups are supported. The value is set to Snapshot .
BackupMode	String	Manual	The backup mode. Valid values: • Automated: automatic backup • Manual: manual backup

Parameter	Type	Example	Description
BackupSetSize	String	7251056	The size of the backup file. Unit: bytes.  Note After you delete the target snapshot backups, the storage space consumed by the backups is released. The released storage space is smaller than the size of the backup file, because the snapshots share certain data blocks.
BackupStartTime	String	2020-05-12T03:25:44Z	The time when this backup task started. The time is displayed in UTC.
BackupStatus	String	Success	The status of the backup task. Valid values: Success: The backup is successful. Failed: The backup task failed.
BackupType	String	FullBackup	The type of the backup. Only full backups are supported. Set the value to FullBackup .
BackupsLevel	String	Level-2	The level of the backup set. Valid values: Level-1: level-1 backup set Level-2: level-2 backup set
ConsistentTime	String	1589253947	The snapshot checkpoint time. The value is a Unix timestamp.
DBClusterId	String	pc-*****	The ID of the PolarDB cluster whose node is to be deleted.
IsAvail	String	1	Indicates whether the backup set is available. Valid values: 0: The backup set is unavailable. 1: The backup set is available.
StoreStatus	String	Disabled	Indicates whether the backup set can be deleted. Valid values: Enabled: The backup set can be deleted. Disabled: The backup set cannot be deleted.

Parameter	Type	Example	Description
PageNumber	String	1	The page number of the page returned.
PageRecordCount	String	1	The number of entries returned per page.
RequestId	String	717B2382-BB14-4DCB-BBC2-32DBE0*****	The ID of the request.
TotalRecordCount	String	1	The total number of entries returned.

Examples

Sample request

```
http(s)://polardb.aliyuncs.com/? Action=DescribeDetachedBackups
&DBClusterId=pc-*****
&EndTime=2020-05-14T00:00Z
&StartTime=2020-05-01T00:00Z
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDetachedBackupsResponse>
  <TotalRecordCount>1</TotalRecordCount>
  <PageRecordCount>1</PageRecordCount>
  <RequestId>717B2382-BB14-4DCB-BBC2-32DBE0*****</RequestId>
  <PageNumber>1</PageNumber>
  <Items>
    <Backup>
      <BackupMethod>Snapshot</BackupMethod>
      <BackupMode>Manual</BackupMode>
      <BackupsLevel>Level-2</BackupsLevel>
      <DBClusterId>pc-*****</DBClusterId>
      <BackupId>62*****</BackupId>
      <IsAvail>1</IsAvail>
      <BackupSetSize>7251056</BackupSetSize>
      <StoreStatus>Enabled</StoreStatus>
      <BackupEndTime>2020-05-12T03:25:55Z</BackupEndTime>
      <BackupStartTime>2020-05-12T03:25:44Z</BackupStartTime>
      <ConsistentTime>1589253947</ConsistentTime>
      <BackupType>FullBackup</BackupType>
      <BackupStatus>Success</BackupStatus>
    </Backup>
  </Items>
</DescribeDetachedBackupsResponse>
```

JSON format

```
{
  "TotalRecordCount": 1,
  "PageRecordCount": 1,
  "RequestId": "717B2382-BB14-4DCB-BBC2-32DBE0*****",
  "PageNumber": 1,
  "Items": {
    "Backup": [
      {
        "BackupMethod": "Snapshot",
        "BackupMode": "Manual",
        "BackupsLevel": "Level-2",
        "DBClusterId": "pc-*****",
        "BackupId": "62*****",
        "IsAvail": 1,
        "BackupSetSize": 7251056,
        "StoreStatus": "Enabled",
        "BackupEndTime": "2020-05-12T03:25:55Z",
        "BackupStartTime": "2020-05-12T03:25:44Z",
        "ConsistentTime": 1589253947,
        "BackupType": "FullBackup",
        "BackupStatus": "Success"
      }
    ]
  }
}
```

Error codes

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

18.6. DescribeDBClustersWithBackups

Queries the details about the PolarDB clusters that contain backup sets and reside in a specified region.

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	No	DescribeDBClustersWithBackups	The operation that you want to perform. Set the value to DescribeDBClustersWithBackups .

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region.  Note You can call the DescribeRegions operation to query region IDs.
DBClusterIds	String	No	pc-*****	The ID of the PolarDB cluster. If you need to specify multiple cluster IDs, separate the cluster IDs with commas (,).
DBClusterDescription	String	No	test	The name of the cluster. The name must meet the following requirements: - The name cannot start with <code>http://</code> or <code>https://</code>. - The name must be 2 to 256 characters in length.
DBType	String	No	MySQL	The type of the database engine. Valid values: MySQL PostgreSQL Oracle
IsDeleted	Integer	No	0	Specifies whether the cluster is deleted. Valid values: 0: not deleted 1: deleted
PageSize	Integer	No	30	The number of entries to return on each page. Valid values: 30 50 100 Default value: 30s.
PageNumber	Integer	No	1	The number of the page to return. The value must be an integer that is larger than 0. Default value: 1.

Parameter	Type	Required	Example	Description
DBVersion	String	No	8.0	The version number of the database engine. Valid values: - Valid values for MySQL: 5.6 5.7 8.0 - PostgreSQL: 11. - Oracle: 11.

Response parameters

Parameter	Type	Example	Description
Items	Array of DBCluster		The details about the cluster.
DBCluster			
CreateTime	String	2020-05-09T09:33:51Z	The time when the cluster was created.
DBClusterDescription	String	test	The name of the cluster.
DBClusterId	String	pc-*****	The ID of the cluster.
DBClusterNetworkType	String	VPC	The network type of the cluster.

Parameter	Type	Example	Description
DBClusterStatus	String	Running	The status of the cluster. Valid values: - Creating: The cluster is being created. - Running: The cluster is running. - Deleting: The cluster is being released. - Rebooting: The cluster is restarting. - DBNodeCreating: The node is being added to the cluster. - DBNodeDeleting: The node is being removed from the cluster. - ClassChanging: The node specification is being changed. - NetAddressCreating: The network connection is being created. - NetAddressDeleting: The network connection is being deleted. - NetAddressModifying: The network connection is being modified. - Deleted: The cluster is deleted.
DBNodeClass	String	polar.mysql.x4.medium	The specification of the node.
DBType	String	MySQL	The engine of the database.
DBVersion	String	8.0	The version of the database engine.
DeletedTime	String	2020-05-12T03:25:37Z	The time when the cluster was deleted.
DeletionLock	Integer	0	Indicates whether the cluster is locked and can be deleted. Valid values: 0: The cluster is not locked and can be deleted. 1: The cluster is locked and cannot be deleted.
Engine	String	POLARDB	The engine of the cluster.

Parameter	Type	Example	Description
ExpireTime	String	2019-09-14T16:00:00Z	The expiration time of the cluster.  Note A specific value will be returned only for subscription clusters. For pay-as-you-go clusters, an empty string will be returned.
Expired	String	false	Indicates whether the cluster expired.  Note A specific value will be returned only for subscription clusters.
IsDeleted	Integer	1	Indicates whether the cluster was deleted. Valid values: 1: deleted 0: not deleted
LockMode	String	Unlock	The lock mode of the cluster. Valid values: Unlock: The instance is not locked. ManualLock: The instance is manually locked. LockByExpiration: The cluster is automatically locked after the cluster expires.
PayType	String	Postpaid	The billing method. Valid values: Postpaid: pay-as-you-go Prepaid: subscription
RegionId	String	cn-hangzhou	The ID of the region.
VpcId	String	vpc-*****	The ID of the virtual private cloud (VPC).
ZoneId	String	cn-hangzhou-h	The zone ID of the cluster.
PageNumber	Integer	1	The page number of the returned page.

Parameter	Type	Example	Description
PageRecordCount	Integer	1	The number of clusters that are returned on the current page.
RequestId	String	F8529AA2-522F-4B30-B80B-8F7D39*****	The ID of the request.
TotalRecordCount	Integer	1	The total number of entries returned.

Examples

Sample request

```
http(s)://polardb.aliyuncs.com/? Action=DescribeDBClustersWithBackups
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDBClustersWithBackupsResponse>
  <TotalRecordCount>1</TotalRecordCount>
  <PageRecordCount>1</PageRecordCount>
  <RequestId>F8529AA2-522F-4B30-B80B-8F7D39*****</RequestId>
  <PageNumber>1</PageNumber>
  <Items>
    <DBCluster>
      <IsDeleted>1</IsDeleted>
      <ZoneId>cn-hangzhou-h</ZoneId>
      <DeletedTime>2020-05-12T03:25:37Z</DeletedTime>
      <DBClusterStatus>Deleted</DBClusterStatus>
      <CreateTime>2020-05-09T09:33:51Z</CreateTime>
      <DBClusterId>pc-*****</DBClusterId>
      <DBClusterDescription>pc-*****</DBClusterDescription>
      <PayType>Postpaid</PayType>
      <DBClusterNetworkType>VPC</DBClusterNetworkType>
      <DBType>MySQL</DBType>
      <LockMode>Unlock</LockMode>
      <DBNodeClass>polar.mysql.x4.medium</DBNodeClass>
      <DBVersion>5.6</DBVersion>
      <VpcId>vpc-*****</VpcId>
      <RegionId>cn-hangzhou</RegionId>
      <Engine>POLARDB</Engine>
    </DBCluster>
  </Items>
</DescribeDBClustersWithBackupsResponse>
```


JSON format

```
{
  "TotalRecordCount": 1,
  "PageRecordCount": 1,
  "RequestId": "F8529AA2-522F-4B30-B80B-8F7D39*****",
  "PageNumber": 1,
  "Items": {
    "DBCluster": [
      {
        "IsDeleted": 1,
        "ZoneId": "cn-hangzhou-h",
        "DeletedTime": "2020-05-12T03:25:37Z",
        "DBClusterStatus": "Deleted",
        "CreateTime": "2020-05-09T09:33:51Z",
        "DBClusterId": "pc-*****",
        "DBClusterDescription": "pc-*****",
        "PayType": "Postpaid",
        "DBClusterNetworkType": "VPC",
        "DBType": "MySQL",
        "LockMode": "Unlock",
        "DBNodeClass": "polar.mysql.x4.medium",
        "DBVersion": "5.6",
        "VpcId": "vpc-*****",
        "RegionId": "cn-hangzhou",
        "Engine": "POLARDB"
      }
    ]
  }
}
```

Error codes

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

18.7. DeleteBackup

Deletes the backups of a specified PolarDB cluster.

Before you call this operation, make sure that the cluster meets the following requirements:

- The cluster is in the Running state.
- The data is backed up for the cluster.

Note

- You can call the [DescribeBackups](#) operation to query the status of backups.
- After you delete the backup file, the storage space that is consumed by the backup file is released. The released storage space is smaller than the size of the backup file, because your snapshots share some data blocks.

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	No	DeleteBackup	The operation that you want to perform. Set the value to DeleteBackup .
BackupId	String	Yes	11111111	The IDs of the backups. If you need to specify multiple backup IDs, separate the backup IDs with commas (.).  Note You can call the DescribeBackups operation to query the backup IDs.
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster.

Response parameters

Parameter	Type	Example	Description
RequestId	String	3CF4F9FE-BF77-4739-8D68-B8DF5D*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DeleteBackup
&BackupId=11111111
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteBackupResponse>
  <RequestId>3CF4F9FE-BF77-4739-8D68-B8DF5D*****</RequestId>
</DeleteBackupResponse>
```

JSON format

```
{
  "RequestId": "3CF4F9FE-BF77-4739-8D68-B8DF5D*****"
}
```

Error codes

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

18.8. Backup policy

18.8.1. DescribeBackupPolicy

Queries the automatic backup policy of a PolarDB cluster.

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	No	DescribeBackupPolicy	The operation that you want to perform. Set the value to DescribeBackupPolicy .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query information about all clusters that are deployed in a specified region, such as the cluster ID.

Response parameters

Parameter	Type	Example	Description
-----------	------	---------	-------------

Parameter	Type	Example	Description
BackupFrequency	String	Normal	The backup frequency. Valid values: Normal (default): standard backup. The system backs up data once a day. 2/24H: enhanced backup. The system backs up data every 2 hours. 3/24H: The enhanced backup. The system backs up data every 3 hours. 4/24H: The enhanced backup. The system backs up data every 4 hours.  Note - After you enable enhanced backup, all backups are retained for 24 hours. Backups are automatically deleted when the retention period expires. However, the system permanently retains the first backup that is created after 00:00:00 every day. - After you enable enhanced backup, the PreferredBackupPeriod parameter is automatically set to all days in a week (from Monday to Sunday).
BackupRetentionPolicyOnClusterDeletion	String	NONE	Specifies whether to retain backups when you delete a cluster. Valid values: ALL: permanently retains all backups. LATEST: permanently retains the last backup. NONE: does not retain backups.
DataLevel1BackupRetentionPeriod	String	7	The retention period of level-1 backups. Valid values: 3 to 14. Unit: days.

Parameter	Type	Example	Description
DataLevel2BackupRetentionPeriod	String	0	The retention period of level-2 backups. Valid values: 0: The level-2 backup feature is disabled. 30 to 7300: Level-2 backups are retained for 30 to 7,300 days. -1: Level-2 backups are permanently retained.  Note The default value is 0. By default, the level-2 backup feature is disabled when you create a cluster.
PreferredBackupPeriod	String	Monday,Tuesday,Wednesday,Thursday,Friday,Saturday,Sunday	The backup cycle. Valid values: - Monday - Tuesday - Wednesday - Thursday - Friday - Saturday - Sunday
PreferredBackupTime	String	07:00Z-08:00Z	The time period during which automatic backup was performed. The start time and the end time are displayed in UTC.
PreferredNextBackupTime	String	2020-11-16T07:30Z	The start time for the next backup. The time is displayed in UTC.
RequestId	String	EADFCE0F-9FB5-4685-B395-1440B*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DescribeBackupPolicy
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeBackupPolicyResponse>
  <PreferredBackupPeriod>Monday,Tuesday,Wednesday,Thursday,Friday,Saturday,Sunday</PreferredBackupPeriod>
  <DataLevel1BackupRetentionPeriod>7</DataLevel1BackupRetentionPeriod>
  <RequestId>1CB29F6D-2FFE-49F5-B8D9-D3469F*****</RequestId>
  <BackupRetentionPolicyOnClusterDeletion>NONE</BackupRetentionPolicyOnClusterDeletion>
  <PreferredBackupTime>07:00Z-08:00Z</PreferredBackupTime>
  <BackupFrequency>Normal</BackupFrequency>
  <PreferredNextBackupTime>2020-11-16T07:30Z</PreferredNextBackupTime>
  <BackupRetentionPeriod>7</BackupRetentionPeriod>
  <DataLevel2BackupRetentionPeriod>0</DataLevel2BackupRetentionPeriod>
</DescribeBackupPolicyResponse>
```

JSON format

```
{
  "PreferredBackupPeriod": "Monday,Tuesday,Wednesday,Thursday,Friday,Saturday,Sunday",
  "DataLevel1BackupRetentionPeriod": 7,
  "RequestId": "1CB29F6D-2FFE-49F5-B8D9-D3469F*****",
  "BackupRetentionPolicyOnClusterDeletion": "NONE",
  "PreferredBackupTime": "07:00Z-08:00Z",
  "BackupFrequency": "Normal",
  "PreferredNextBackupTime": "2020-11-16T07:30Z",
  "BackupRetentionPeriod": 7,
  "DataLevel2BackupRetentionPeriod": 0
}
```

Error codes

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

18.8.2. DescribeLogBackupPolicy

Queries the retention policy of log backups in a PolarDB cluster.

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	No	DescribeLogBackupPolicy	The operation that you want to perform. Set the value to DescribeLogBackupPolicy .

Parameter	Type	Required	Example	Description
DBClusterId	String	Yes	pc-*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query all the information about the available clusters in the target region, including the cluster ID.

Response parameters

Parameter	Type	Example	Description
EnableBackupLog	Integer	1	Indicates whether the log backup feature was enabled. Valid values: 0: disabled. 1: enabled. By default, the log backup feature is enabled and cannot be disabled.
LogBackupRetentionPeriod	Integer	7	The retention period of the logs. Valid values: 7 to 7300: The logs are retained for 7 to 7,300 days. -1: The logs are permanently retained.
RequestId	String	62EE0051-102B-488D-9C79-D607B8*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DescribeLogBackupPolicy
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeLogBackupPolicyResponse>
  <LogBackupRetentionPeriod>7</LogBackupRetentionPeriod>
  <RequestId>62EE0051-102B-488D-9C79-D607B8*****</RequestId>
  <EnableBackupLog>1</EnableBackupLog>
</DescribeLogBackupPolicyResponse>
```

JSON format

```
{
  "LogBackupRetentionPeriod": 7,
  "RequestId": "62EE0051-102B-488D-9C79-D607B8*****",
  "EnableBackupLog": 1
}
```

Error codes

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

18.8.3. ModifyBackupPolicy

Modifies the automatic backup policy of a PolarDB cluster.

You can also modify the automatic backup policy of a PolarDB cluster in the console. For more information, see [Back up data](#).

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	No	ModifyBackupPolicy	The operation that you want to perform. Set the value to ModifyBackupPolicy .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query information about all clusters that are deployed in a specified region, such as the cluster ID.

Parameter	Type	Required	Example	Description
PreferredBackupPeriod	String	No	Monday,Tuesday	The backup cycle. Valid values: - Monday - Tuesday - Wednesday - Thursday - Friday - Saturday - Sunday  Note Select at least two values. Separate multiple values with commas (,).
PreferredBackupTime	String	No	15:00Z-16:00Z	The time period during which automatic backup is performed. The value must be in the <code>hh:mmZ-hh:mmZ</code> format. The time must be in UTC. The start time and end time must be on the hour and with an interval of one hour. For example, <code>14:00Z-15:00Z</code>.
DataLevel1BackupRetentionPeriod	String	No	3	The retention period of level-1 backups. Valid values: 3 to 14. Unit: days.
DataLevel2BackupRetentionPeriod	String	No	0	The retention period of level-2 backups. Valid values: 0: The level-2 backup feature is disabled. 30 to 7300: Level-2 backups are retained for 30 to 7,300 days. -1: Level-2 backups are permanently retained.  Note The default value is 0. By default, the level-2 backup feature is disabled when you create a cluster.

Parameter	Type	Required	Example	Description
BackupRetentionPolicyOnClusterDeletion	String	No	NONE	Specifies whether to retain backups when you delete a cluster. Valid values: • ALL: permanently retains all backups. • LATEST: permanently retains the last backup. • NONE: does not retain backups.  Note The default value is NONE.

Parameter	Type	Required	Example	Description
BackupFrequency	String	No	Normal	The backup frequency. Valid values: Normal (default): standard backup. The system backs up data once a day. 2/24H: enhanced backup. The system backs up data every 2 hours. 3/24H: The enhanced backup. The system backs up data every 3 hours. 4/24H: The enhanced backup. The system backs up data every 4 hours.  Note - After you enable enhanced backup, all backups are retained for 24 hours. Backups are automatically deleted when the retention period expires. However, the system permanently retains the first backup that is created after 00:00:00 every day. - After you enable enhanced backup, the PreferredBackupPeriod parameter is automatically set to all days in a week (from Monday to Sunday).

Response parameters

Parameter	Type	Example	Description
RequestId	String	C5A5DF0E-5968-4DC1-882E-AC2FE7*****	The ID of the request.

Examples

Sample requests

```
http(s)://polaradb.aliyuncs.com/?Action=ModifyBackupPolicy
&DBClusterId=pc-bp13wz9586voc****
&PreferredBackupTime=15:00Z-16:00Z
&PreferredBackupPeriod=Monday,Tuesday
&DataLevel1BackupRetentionPeriod=3
&DataLevel2BackupRetentionPeriod=0
&BackupRetentionPolicyOnClusterDeletion=NONE
&BackupFrequency=Normal
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyBackupPolicyResponse>
  <RequestId>C5A5DF0E-5968-4DC1-882E-AC2FE7*****</RequestId>
</ModifyBackupPolicyResponse>
```

JSON format

```
{
  "RequestId": "C5A5DF0E-5968-4DC1-882E-AC2FE7*****"
}
```

Error codes

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

18.8.4. ModifyLogBackupPolicy

Modifies the retention policy of log backups for an Apsara PolarDB cluster.

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	No	ModifyLogBackupPolicy	The operation that you want to perform. Set the value to ModifyBackupPolicy .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query all the information about the available clusters in the target region, including the cluster ID.
LogBackupRetentionPeriod	String	No	3	The retention period of the log data. Valid values: 3 to 7300: The log data is retained for 3 to 7,300 days. -1: The log data is permanently retained.

Response parameters

Parameter	Type	Example	Description
RequestId	String	345174B4-FAB3-412E-A326-BEDDA9*****	The ID of the request.

Examples

Sample request

```
http(s)://polardb.aliyuncs.com/? Action=ModifyLogBackupPolicy
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyLogBackupPolicyResponse>
  <RequestId>345174B4-FAB3-412E-A326-BEDDA9*****</RequestId>
</ModifyLogBackupPolicyResponse>
```

JSON format

```
{
  "RequestId": "345174B4-FAB3-412E-A326-BEDDA9*****"
}
```

Error codes

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

19. Restore management

19.1. DescribeMetaList

Queries the details of the databases or tables that can be restored.

 **Note** Only PolarDB for MySQL 5.6 clusters support the database and table restoration feature. For more information, see [Restore databases and tables](#).

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	DescribeMetaList	The operation that you want to perform. Set the value to DescribeMetaList .
RegionId	String	No	cn-hangzhou	The region ID of the cluster.  Note You can call the DescribeRegions operation to query the region details.
DBClusterId	String	Yes	pc-*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query the details of all clusters under your account.

Parameter	Type	Required	Example	Description
BackupId	String	No	111111	The ID of the data backup file.  Note - When you run a query, you must specify the <code>BackupId</code> or <code>RestoreTime</code> parameter. - You can call the <code>DescribeBackups</code> operation to query the ID of the backup set.
RestoreTime	String	No	2020-10-04T01:40:00Z	The point in time for the restoration. Specify the time in the YYYY-MM-DDThh:mmZ format. The time must be in UTC.  Note When you run a query, you must specify the <code>BackupId</code> or <code>RestoreTime</code> parameter. You can call the <code>DescribeBackups</code> operation to query the point in time for the restoration.

Parameter	Type	Required	Example	Description
GetDbName	String	No	test_db	Specify the specific database name (such as <code>test_db</code>) to query the names of all data tables that can be restored in the desired database.  Note - You can specify only one database name each time. - If you do not specify this parameter, you can query the names of all databases that can be restored in the current backup set. However, you cannot query the names of data tables in each database.
PageSize	Integer	No	30	The number of entries to return on each page. Valid values: 30 50 100 Default value: 30.
PageNumber	Integer	No	1	The number of the page to return. The value must be an integer that is greater than 0. Default value: 1.

Response parameters

Parameter	Type	Example	Description
TotalPageCount	String	1	The total number of returned pages.
TotalRecordCount	String	2	The total number of entries.
PageSize	String	30	The number of entries returned per page.
RequestId	String	AA815DE7-B576-4B22-B33C-3FB31A*****	The ID of the request.
PageNumber	String	1	The number of the returned page.
Items	Array of MetaItem		The details of databases and tables that can be restored.
Database	String	test_db	The name of the database that can be restored.
Tables	Array of String	test_tb1	The name of the table that can be restored.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeMetaList
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeMetaListResponse>
<TotalRecordCount>2</TotalRecordCount>
<TotalPageCount>1</TotalPageCount>
<RequestId>AA815DE7-B576-4B22-B33C-3FB31A*****</RequestId>
<PageSize>30</PageSize>
<PageNumber>1</PageNumber>
<Items>
  <Database>test_db</Database>
  <Tables>test_tb1</Tables>
  <Tables>test_tb2</Tables>
</Items>
</DescribeMetaListResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalRecordCount" : 2,
  "TotalPageCount" : 1,
  "RequestId" : "AA815DE7-B576-4B22-B33C-3FB31A*****",
  "PageSize" : 30,
  "PageNumber" : 1,
  "Items" : [ {
    "Database" : "test_db",
    "Tables" : [ "test_tb1", "test_tb2" ]
  } ]
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRestoreType.Format	Specified restore type is not valid.	The error message returned because the specified restoration type is invalid.
400	InvalidRestoreTime.Format	Specified restore time is not valid.	The error message returned because the specified restoration time is invalid.
400	InvalidBackupSetID.NotFound	Specified backup set ID does not exist.	The error message returned because the specified backup set ID does not exist.

HTTP status code	Error code	Error message	Description
400	IncorrectBackupSetState	Current backup set state does not support operations.	The error message returned because the operation is not supported while the backup set is in the current state.
400	InvalidDBName.Duplicate	Specified DB name already exists in the This instance.	The error message returned because the specified database name already exists in this cluster.
400	InvalidParameters.Format	Specified parameters is not valid.	The error message returned because a specified parameter is invalid.
400	InsufficientResourceCapacity	There is insufficient capacity available for the requested instance.	The error message returned because the requested cluster does not have sufficient space.
404	InvalidDBCluster.NotFound	The DBClusterId provided does not exist in our records.	The error message returned because the specified DBClusterId does not exist in the current record.
404	InvalidBackup.NotFound	The available backup does not exist in recovery time.	The error message returned because no backup set is available within the specified restoration time.

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

19.2. RestoreTable

Restores PolarDB databases and tables.

 **Note** Only ApsaraDB PolarDB MySQL-compatible edition 5.6 clusters support the database and table restoration feature. For more information, see [Restore databases and tables](#).

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
-----------	------	----------	---------	-------------

Parameter	Type	Required	Example	Description
Action	String	No	RestoreTable	The operation that you want to perform. Set the value to RestoreTable .
DBClusterId	String	Yes	pc-bp*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query the details of all clusters under your account.
TableMeta	String	Yes	<pre>[{"tables":[{"name":"testtb","type":"table","newname":"testtb_restore"}],{"name":"testdb","type":"db","newname":"testdb_restore"}]}</pre>	The JSON string that contains the information about the database and the table that you want to restore. All values of the database and table information are of the string type. Example: <pre>[{"tables":[{"name":"testtb","type":"table","newname":"testtb_restore"}],{"name":"testdb","type":"db","newname":"testdb_restore"}]}</pre>  Note You can call the DescribeMetaList operation to query the names and details of databases and tables that can be restored and enter their information into the corresponding locations in the preceding example.
BackupId	String	No	111111	The ID of the backup set.  Note You must specify this parameter if you need to restore a database or a table by using a backup set. You can call the DescribeBackups operation to query the ID of the backup set.

Parameter	Type	Required	Example	Description
RestoreTime	String	No	2020-10-04T01:40:00Z	The point in time for the restoration. Specify the time in the YYYY-MM-DDThh:mmZ format. The time must be in UTC.  Note - You must specify this parameter if you need to restore the database or the table to a point in time. - You can restore the database or the table to a point in time within only the last seven days.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0C47508C-9DC8-455B-985E-2F2FA8*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=RestoreTable
&DBClusterId=pc-bp*****
&TableMeta=[ { "tables":[ { "name":"testtb", "type":"table", "newname":"testtb_restore" } ]
, "name":"testdb", "type":"db", "newname":"testdb_restore" } ]
&<Common request parameters>
```

Sample success responses

XML format

```
<RestoreTableResponse>
  <RequestId>0C47508C-9DC8-455B-985E-2F2FA8*****</RequestId>
</RestoreTableResponse>
```

JSON format

```
{
  "RequestId": "0C47508C-9DC8-455B-985E-2F2FA8*****"
}
```

Error codes

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

20. Data migration from RDS

20.1. DescribeDBClusterMigration

Queries the migration status of PolarDB clusters.

- You can call this operation to query the status of data migration from an ApsaraDB for RDS cluster to an Apsara PolarDB cluster. For more information, see [Upgrade RDS for MySQL to ApsaraDB PolarDB MySQL-compatible edition with one click](#).
- Before you call this operation, make sure that you have created an upgrade task for the cluster. You can call the [CreateDBCluster](#) operation to create an upgrade task. Set the **CreationOption** parameter to **MigrationFromRDS**.

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	No	DescribeDBClusterMigration	The operation that you want to perform. Set the value to DescribeDBClusterMigration .
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster whose node is to be deleted.
RegionId	String	No	cn-hangzhou	The ID of the region where the DRDS database is located.

Response parameters

Parameter	Type	Example	Description
Comment	String	test	The description of a migration exception. If no exception occurs during the migration, an empty string is returned.
DBClusterEndpointList	Array of DBClusterEndpoint		The endpoints of the Apsara PolarDB cluster.

Parameter	Type	Example	Description
AddressItems	Array of Address		The details of the connection string.
ConnectionString	String	pc-*****.rwlb.rds.aliyuncs.com	The connection string.
IPAddress	String	192.***.***.10	The IP address.
NetType	String	Private	The network type of the connection string. Valid values: • Public: public-facing endpoint • Private: VPC-facing endpoint • Inner: internal endpoint (classic network)
Port	String	3306	The port number.
VPCId	String	vpc-*****	The ID of the VPC.
VSwitchId	String	vsw-*****	The ID of the vSwitch.
DBEndpointId	String	pe-*****	The ID of the endpoint.
EndpointType	String	Cluster	The type of the endpoint. Valid values: • Cluster: default endpoint • Primary: primary endpoint • Custom: the custom cluster endpoint
DBClusterId	String	pc-*****	The ID of the cluster.
DBClusterReadWriteMode	String	ro	The cluster mode. Valid values: • rw: read and write mode. • ro: read-only mode.
DelayedSeconds	Integer	0	The replication latency between ApsaraDB for RDS and Apsara PolarDB. Unit: seconds.

Parameter	Type	Example	Description
ExpiredTime	String	2020-06-17T01:56:36Z	The expiration time of the replication between ApsaraDB for RDS and Apsara PolarDB. Specify the time in the ISO 8601 standard in the <code>YYYY-MM-DDThh:mm:ssZ</code> format. The time must be in UTC.
MigrationStatus	String	RDS2POLARDB_SYNCING	The migration status of the PolarDB cluster. Valid values: NO_MIGRATION: No migration task is running. RDS2POLARDB_CLONING: Data is being replicated. RDS2POLARDB_SYNCING: Data is being replicated. During the replication, the Apsara PolarDB cluster is running in read-only mode and the source ApsaraDB for RDS instance is running in read and write mode. SWITCHING: Databases are being switched. POLARDB2RDS_SYNCING: Databases are switched. The Apsara PolarDB cluster is running in read and write mode and the source ApsaraDB for RDS instance is running in read-only mode. You can change the endpoint in your application. ROLLBACK: The migration is being rolled back. After the rollback is complete, the value RDS2POLARDB_SYNCING is returned. CLOSING_MIGRATION: The migration task is being closed.
RdsEndpointList	Array of RdsEndpoint		The endpoints of the ApsaraDB for RDS cluster.
AddressItems	Array of Address		The details of the connection string.
ConnectionString	String	rm-*****.mysql.rds.aliyuncs.com	The connection string.
IPAddress	String	172.***.***.173	The IP address.

Parameter	Type	Example	Description
NetType	String	Private	The network type of the connection string. Valid values: • Public: public-facing endpoint • Private: VPC-facing endpoint • Inner: internal endpoint (classic network)
Port	String	3306	The port number.
VPCId	String	vpc-*****	The ID of the VPC.
VSwitchId	String	vsw-*****	The ID of the vSwitch.
DBEndpointId	String	rm-*****_normal	The ID of the endpoint.
EndpointType	String	Normal	The type of the endpoint. Valid values: • Normal: standard endpoint • ReadWriteSplitting: read-write splitting endpoint
RdsReadWriteMode	String	rw	The RDS mode. Valid values: • rw: read and write mode • ro: read-only mode
RequestId	String	F2A9EFA7-915F-4572-8299-85A307*****	The ID of the request.
SourceRDSDBInstanceId	String	rm-*****	The ID of the source ApsaraDB for RDS instance.
Topologies	String	RDS2POLARDB	The synchronization status. Valid values: • RDS2POLARDB: Data is replicated from ApsaraDB for RDS to Apsara PolarDB. • POLARDB2RDS: Data is replicated from Apsara PolarDB to ApsaraDB for RDS.

Examples

Sample request

```
http(s)://polardb.aliyuncs.com/? Action=DescribeDBClusterMigration
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DBClusterEndpointList>
  <DBEndpointId>pe-*****</DBEndpointId>
  <EndpointType>Cluster</EndpointType>
  <AddressItems>
    <VPCId>vpc-*****</VPCId>
    <Port>3306</Port>
    <VSwitchId>vsw-*****</VSwitchId>
    <ConnectionString>pc-*****.rwl.b.rds.aliyuncs.com</ConnectionString>
    <IPAddress>192. ***. ***.10</IPAddress>
    <NetType>Private</NetType>
  </AddressItems>
</DBClusterEndpointList>
<DBClusterEndpointList>
  <DBEndpointId>pe-*****</DBEndpointId>
  <EndpointType>Primary</EndpointType>
  <AddressItems>
    <VPCId>vpc-*****</VPCId>
    <Port>3306</Port>
    <VSwitchId>vsw-*****</VSwitchId>
    <ConnectionString>pc-*****.mysql.polardb.rds.aliyuncs.com</ConnectionString>
    <IPAddress>192. ***. ***.4</IPAddress>
    <NetType>Private</NetType>
  </AddressItems>
</DBClusterEndpointList>
<Comment/>
<RequestId>F2A9EFA7-915F-4572-8299-85A307*****</RequestId>
<ExpiredTime>2020-06-17T01:56:36Z</ExpiredTime>
<DBClusterId>pc-*****</DBClusterId>
<Topologies>RDS2POLARDB</Topologies>
<RdsReadWriteMode>rw</RdsReadWriteMode>
<SourceRDSDBInstanceId>rm-*****</SourceRDSDBInstanceId>
<DBClusterReadWriteMode>ro</DBClusterReadWriteMode>
<DelayedSeconds>0</DelayedSeconds>
<MigrationStatus>RDS2POLARDB_SYNCING</MigrationStatus>
<RdsEndpointList>
  <DBEndpointId>rm-*****-normal</DBEndpointId>
  <EndpointType>Normal</EndpointType>
  <AddressItems>
    <VPCId>vpc-*****</VPCId>
    <Port>3306</Port>
    <VSwitchId>vsw-*****</VSwitchId>
    <ConnectionString>rm-*****.mysql.rds.aliyuncs.com</ConnectionString>
    <IPAddress>172. ***. ***.173</IPAddress>
    <NetType>Private</NetType>
  </AddressItems>
</RdsEndpointList>
```

```
<RdsEndpointList>
  <DBEndpointId>rm-*****-normal</DBEndpointId>
  <EndpointType>Normal</EndpointType>
  <AddressItems>
    <VPCId/>
    <Port>3306</Port>
    <VSwitchId/>
    <ConnectionString>rm-*****.mysql.rds.aliyuncs.com</ConnectionString>
    <IPAddress>101. ***. ***.19</IPAddress>
    <NetType>Public</NetType>
  </AddressItems>
</RdsEndpointList>
```

JSON format

```
{
  "DBClusterEndpointList": [
    {
      "DBEndpointId": "pe-*****",
      "EndpointType": "Cluster",
      "AddressItems": {
        "VPCId": "vpc-*****",
        "Port": 3306,
        "VSwitchId": "vsw-*****",
        "ConnectionString": "pc-*****.rwlb.rds.aliyuncs.com",
        "IPAddress": "192. ***. ***.10",
        "NetType": "Private"
      }
    },
    {
      "DBEndpointId": "pe-*****",
      "EndpointType": "Primary",
      "AddressItems": {
        "VPCId": "vpc-*****",
        "Port": 3306,
        "VSwitchId": "vsw-*****",
        "ConnectionString": "pc-*****.mysql.polardb.rds.aliyuncs.com",
        "IPAddress": "192. ***. ***.4",
        "NetType": "Private"
      }
    }
  ],
  "Comment": "",
  "RequestId": "F2A9EFA7-915F-4572-8299-85A307*****",
  "ExpiredTime": "2020-06-17T01:56:36Z",
  "DBClusterId": "pc-*****",
  "Topologies": "RDS2POLARDB",
  "RdsReadWriteMode": "rw",
  "SourceRDSDBInstanceId": "rm-*****",
  "DBClusterReadWriteMode": "ro",
  "DelayedSeconds": 0,
  "MigrationStatus": "RDS2POLARDB_SYNCING",
  "RdsEndpointList": [
```

```
{
  "DBEndpointId": "rm-*****-normal",
  "EndpointType": "Normal",
  "AddressItems": {
    "VPCId": "vpc-*****",
    "Port": 3306,
    "VSwitchId": "vsw-*****",
    "ConnectionString": "rm-*****.mysql.rds.aliyuncs.com",
    "IPAddress": "172. ***. ***.173",
    "NetType": "Private"
  }
},
{
  "DBEndpointId": "rm-*****-normal",
  "EndpointType": "Normal",
  "AddressItems": {
    "VPCId": "",
    "Port": 3306,
    "VSwitchId": "",
    "ConnectionString": "rm-*****.mysql.rds.aliyuncs.com",
    "IPAddress": "101. ***. ***.19",
    "NetType": "Public"
  }
}
]
```

Error codes

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

20.2. ModifyDBClusterMigration

Switches or rolls back the task that migrates data from ApsaraDB for RDS to Apsara PolarDB.

- Migrate data from ApsaraDB for RDS to Apsara PolarDB.
- Roll back data migration from Apsara PolarDB to ApsaraDB for RDS.

 **Note** Before you call this operation, make sure that an upgrade task is created for the cluster. You can call the [CreateDBCluster](#) operation to create an upgrade task. Set the [CreationOption](#) parameter to [MigrationFromRDS](#). For more information, see [Create a ApsaraDB PolarDB MySQL-compatible edition cluster by using the Migration from RDS method](#).

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	No	ModifyDBClusterMigration	The operation that you want to perform. Set the value to ModifyDBClusterMigration .
DBClusterId	String	Yes	pc-*****	The ID of the Apsara PolarDB cluster.
NewMasterInstanceid	String	Yes	pc-*****	The ID of the new instance or new cluster. Valid values: - To perform a data migration, enter the ID of the Apsara PolarDB cluster. - To perform a migration rollback, enter the ID of the ApsaraDB for RDS instance.
SourceRDSDBInstanceid	String	Yes	rm-*****	The ID of the source ApsaraDB for RDS instance.
RegionId	String	No	cn-hangzhou	The region ID of the cluster.
SwapConnectionString	String	No	false	Specifies whether to interchange the endpoints of the instances. Valid values: true: interchanges the endpoints. If you select this option, you do not need to change the endpoint in your applications. false: does not interchange the endpoints. If you select this option, you must specify the endpoint of the PolarDB cluster in your applications. Default value: false .

Response parameters

Parameter	Type	Example	Description
RequestId	String	A1B303A5-653F-4AEE-A598-023FF9*****	The ID of the request.

Examples

Sample request

```
http(s)://polardb.aliyuncs.com/? Action=ModifyDBClusterMigration
&DBClusterId=pc-*****
&NewMasterInstanceId=pc-*****
&SourceRDSDBInstanceId=rm-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDBClusterMigrationResponse>
  <RequestId>A1B303A5-653F-4AEE-A598-023FF9*****</RequestId>
</ModifyDBClusterMigrationResponse>
```

JSON format

```
{
  "RequestId": "A1B303A5-653F-4AEE-A598-023FF9*****"
}
```

Error codes

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

20.3. CloseDBClusterMigration

Cancels or completes the migration task that upgrades an RDS cluster to a PolarDB cluster.

- Cancel the migration task before data migration.
- Perform the migration task after data migration.

 **Note** Before you call this operation, make sure that an upgrade task for the cluster is created. You can call the [CreateDBCluster](#) operation to create an upgrade task. Set the **CreationOption** parameter to **MigrationFromRDS**. For more information, see [Upgrade RDS for MySQL to ApsaraDB PolarDB MySQL-compatible edition](#).

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	No	CloseDBClusterMigration	The operation that you want to perform. Set the value to CloseDBClusterMigration .

Parameter	Type	Required	Example	Description
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
RegionId	String	No	cn-hangzhou	The ID of the region.
ContinueEnableBinlog	Boolean	No	true	Specifies whether to continue to enable binary logs. Valid values: true: continues to enable binary logs. false: disables binary logs. Default value: true.  Note If binary logs are disabled, your PolarDB cluster is restarted.

Response parameters

Parameter	Type	Example	Description
RequestId	String	3AA69096-757C-4647-B36C-29EBC2*****	The ID of the request.

Examples

Sample request

```
http(s)://polardb.aliyuncs.com/? Action=CloseDBClusterMigration
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<CloseDBClusterMigrationResponse>
  <RequestId>3AA69096-757C-4647-B36C-29EBC2*****</RequestId>
</CloseDBClusterMigrationResponse>
```

JSON format

```
{
  "RequestId": "3AA69096-757C-4647-B36C-29EBC2*****"
}
```

Error codes

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

21.Tag management

21.1. TagResources

Creates tags for one or more PolarDB clusters.

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	TagResources	The operation that you want to perform. Set the value to TagResources .
RegionId	String	Yes	cn-hangzhou	The region ID of the cluster.
ResourceType	String	Yes	cluster	The type of the resource. Set the value to cluster .
Tag.N.Key	String	No	type	The tag key. To create multiple tags for a cluster at a time, click Add to add tags.  Note You can create up to 20 key-value pairs of tags at a time. Each value of <code>Tag.N.Key</code> is paired with a value of <code>Tag.N.Value</code>.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	test	The tag value. To create multiple tags for a cluster at a time, click Add to add tags.  Note You can create up to 20 key-value pairs of tags at a time. Each value of the <code>Tag.N.Value</code> parameter is paired with a value of the <code>Tag.N.Key</code> parameter.

Response parameters

Parameter	Type	Example	Description
RequestId	String	1CB5286F-AF5A-4E09-BFE9-588D4C*****	The ID of the request.

Examples

Sample requests

```
https://polardb.aliyuncs.com/?Action=TagResources
&RegionId=cn-hangzhou
&ResourceType=cluster
&ResourceId=["pc-*****"]
&Tag=[{"Key":"type","Value":"test"}]
&Common request parameters
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<TagResourcesResponse>
  <RequestId>1CB5286F-AF5A-4E09-BFE9-588D4C*****</RequestId>
</TagResourcesResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "1CB5286F-AF5A-4E09-BFE9-588D4C*****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	NumberExceed.Tags	The number of tags is exceed , Valid : 20	The error message returned because the number of created tags exceeds the upper limit. You can create up to 20 tags for a cluster.

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

21.2. UntagResources

Detaches tags from PolarDB clusters.

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	No	UntagResources	The operation that you want to perform. Set the value to UntagResources .
RegionId	String	Yes	cn-hangzhou	The ID of the region.  Note You can call the DescribeRegions operation to query the available regions.

Parameter	Type	Required	Example	Description
ResourceId.N	RepeatList	Yes	pc-*****	The ID of the cluster from which you want to detach tags. To detach tags from multiple clusters at a time, click the plus sign (+) icon to add cluster IDs. Note You can detach tags from a maximum of 50 clusters at a time.
ResourceType	String	Yes	cluster	The type of the resource. Set the value to cluster .
TagKey.N	RepeatList	No	type	The tag key. To detach multiple tags from a cluster at a time, click the plus sign (+) icon to add tag keys. Note You can add up to 20 tag keys at a time.
All	Boolean	No	true	Specifies whether to detach all the tags from the cluster. Valid values: true or false. Default value: false. Note This parameter only takes effect when the value of the <code>TagKey.n</code> parameter is empty.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2D69A58F-345C-4FDE-88E4-BF5189*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=UntagResources
&RegionId=cn-hangzhou
&ResourceId.1=pc-*****
&ResourceType=cluster
&<Common request parameters>
```

Sample success responses

XML format

```
<UntagResourcesResponse>
  <RequestId>2D69A58F-345C-4FDE-88E4-BF5189*****</RequestId>
</UntagResourcesResponse>
```

JSON format

```
{
  "RequestId": "2D69A58F-345C-4FDE-88E4-BF5189*****"
}
```

Error codes

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

21.3. ListTagResources

Queries the tags that are attached to one or more PolarDB clusters, or queries the PolarDB clusters to which one or more tags are attached.

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	No	ListTagResources	The operation that you want to perform. Set the value to ListTagResources .
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
ResourceType	String	Yes	cluster	The type of the resource. Set the value to cluster .

Parameter	Type	Required	Example	Description
ResourceId.N	RepeatList	No	pc-*****	The ID of the cluster. To query the tags of multiple clusters, click the plus sign (+) icon to add cluster IDs. Note - You must specify at least one of the <code>ResourceId.N</code> and <code>Tag.N.Key</code> parameters. - If you specify the <code>ResourceId.N</code> parameter, you can add a maximum of 50 cluster IDs at a time.
Tag.N.Key	String	No	type	The key of the tag. To query the details of clusters to which multiple tags are attached, click the plus sign (+) icon to add tags. Note - You must specify at least one of the <code>ResourceId.N</code> and <code>Tag.N.Key</code> parameters. - If you specify the <code>Tag.N.Key</code> parameter, you can add up to 20 key-value pairs of tags at a time.
Tag.N.Value	String	No	test	The tag value that is paired with the tag key. This parameter can be an empty string.

Parameter	Type	Required	Example	Description
NextToken	String	No	212db86sca4384811e0b5e8707e****	The token that is used to obtain more results. This parameter is not required in the first query. If the first query does not return all results, you can use the token that is returned from the first query in the next query to obtain more results.

Response parameters

Parameter	Type	Example	Description
NextToken	String	212db86sca4384811e0b5e8707e*****	The token that was used to obtain more results. If not all results are returned in this query, the token is returned. You can use this token in the next query to obtain more results.
RequestId	String	688C04E4-23F8-409F-8A38-B954D5*****	The ID of the request.
TagResources	Array of TagResource		The information about the clusters and tags that were queried.
TagResource			
ResourceId	String	pc-*****	The ID of the cluster.
ResourceType	String	cluster	The type of the resource. The returned value is cluster .
TagKey	String	type	The key of the tag.
TagValue	String	test	The value of the tag.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=ListTagResources
&RegionId=cn-hangzhou
&ResourceType=cluster
&<Common request parameters>
```

Sample success responses

XML format

```
<ListTagResourcesResponse>
  <RequestId>688C04E4-23F8-409F-8A38-B954D5*****</RequestId>
  <TagResources>
    <TagResource>
      <ResourceId>pc-*****</ResourceId>
      <TagKey>type</TagKey>
      <ResourceType>cluster</ResourceType>
      <TagValue>test</TagValue>
    </TagResource>
  </TagResources>
</ListTagResourcesResponse>
```

JSON format

```
{
  "RequestId": "688C04E4-23F8-409F-8A38-B954D5*****",
  "TagResources": {
    "TagResource": [
      {
        "ResourceId": "pc-*****",
        "TagKey": "type",
        "ResourceType": "cluster",
        "TagValue": "test"
      }
    ]
  }
}
```

Error codes

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

22.Pending events

22.1.

DescribePendingMaintenanceAction

Queries the details of a pending event.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	No	DescribePendingMaintenanceAction	The operation that you want to perform. Set the value to DescribePendingMaintenanceAction .
Region	String	Yes	all	The ID of the region to which the pending event belongs. You can call the DescribeRegions operation to query the regions and zones that are supported by PolarDB.  Note - You can set this parameter to all to view all pending events within your account. - If the <code>Region</code> parameter is set to all, the <code>TaskType</code> parameter must be set to all.
RegionId	String	No	cn-hangzhou	The ID of the region.

Parameter	Type	Required	Example	Description
TaskType	String	Yes	all	The type of the pending event. Valid values: DatabaseSoftwareUpgrading: database software upgrades. DatabaseHardwareMaintenance: hardware maintenance and upgrades. DatabaseStorageUpgrading: database storage upgrades. DatabaseProxyUpgrading: minor version upgrades of the proxy. all: queries the details of the pending events of all preceding types.  Note If the <code>Region</code> parameter is set to <code>all</code>, the <code>TaskType</code> parameter must be set to <code>all</code>.
IsHistory	Integer	No	0	Specifies whether to return the historical tasks. Valid values: 0: returns the current task. 1: returns the historical tasks. Default value: 0.
PageSize	Integer	No	30	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. The value must be an integer that is larger than 0. Default value: 1.

Response parameters

Parameter	Type	Example	Description
Items	Array of Items		The list of tasks.

Parameter	Type	Example	Description
CreatedTime	String	2020-06-09T22:00:42Z	The time when the task was created. The time follows the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time is displayed in UTC.
DBClusterId	String	pc-*****	The ID of the cluster.
DBType	String	MySQL	The type of the database engine. Valid values: - MySQL - PostgreSQL - Oracle
DBVersion	String	8.0	The version number of the database engine. Valid values: - MySQL: 5.6 5.7 8.0 - PostgreSQL: 11. - Oracle: 11.
Deadline	String	2020-06-11T15:59:59Z	The deadline before which the task can be executed. The time follows the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time is displayed in UTC.
Id	Integer	111111	The ID of the task.
ModifiedTime	String	2020-06-09T22:00:42Z	The time when the instance was created. The time follows the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time is displayed in UTC.
PrepareInterval	String	04:00:00	The preparation time that is required before the pending event is switched. The time follows the <code>HH:mm:ss</code> format.
Region	String	cn-hangzhou	The ID of the region to which the task belongs.

Parameter	Type	Example	Description
ResultInfo	String	manualCancel	The execution result of the task. Valid values: manualCancel: The task is manually canceled. paramCheckNotPass: The task fails to pass the parameter check.  Note This parameter is returned only when the value of the <code>Status</code> parameter is 6 or 7. The value 6 indicates that the task is completed but fails to be executed. The value 7 indicates that the task is canceled.
StartTime	String	2020-06-09T18:00:00Z	The time when the task was executed in the background. The time follows the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time is displayed in UTC.
Status	Integer	3	The status of the task. - If you set the <code>IsHistory</code> parameter to 0, the status of the pending task is returned. Valid values: 2: The start time of the task is to be specified. 3: The task is pending. 4: The task is running. In this case, you cannot modify the execution time. - If you set the <code>IsHistory</code> parameter to 1, the details of the historical tasks are returned. Valid values: 5: The task is completed and executed. 6: The task is completed but fails to be executed. 7: The task is canceled.
SwitchTime	String	2020-06-09T22:00:00Z	The time when the pending event was switched. The time follows the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time is displayed in UTC.
TaskType	String	DatabaseSoftwareUpgrading	The type of the pending event.

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	30	The number of entries returned per page.
RequestId	String	2F029645-FED9-4FE8-A6D3-488954*****	The ID of the request.
TotalRecordCount	Integer	1	The total number of entries.

Examples

Sample requests

```
http(s)://polaradb.aliyuncs.com/? Action=DescribePendingMaintenanceAction
&Region=all
&TaskType=all
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribePendingMaintenanceActionResponse>
  <TotalRecordCount>1</TotalRecordCount>
  <PageSize>30</PageSize>
  <RequestId>2F029645-FED9-4FE8-A6D3-488954*****</RequestId>
  <PageNumber>1</PageNumber>
  <Items>
    <Status>3</Status>
    <CreatedTime>2020-06-09T22:00:42Z</CreatedTime>
    <Deadline>2020-06-11T15:59:59Z</Deadline>
    <StartTime>2020-06-09T18:00:00Z</StartTime>
    <DBClusterId>pc-*****</DBClusterId>
    <DBType>MySQL</DBType>
    <DBVersion>8.0</DBVersion>
    <ModifiedTime>2020-06-09T22:00:42Z</ModifiedTime>
    <TaskType>DatabaseSoftwareUpgrading</TaskType>
    <Region>cn-hangzhou</Region>
    <PrepareInterval>04:00:00</PrepareInterval>
    <Id>111111</Id>
    <SwitchTime>2020-06-09T22:00:00Z</SwitchTime>
  </Items>
</DescribePendingMaintenanceActionResponse>
```

JSON format

```
{
  "TotalRecordCount": "1",
  "PageSize": "30",
  "RequestId": "2F029645-FED9-4FE8-A6D3-488954*****",
  "PageNumber": "1",
  "Items": [{
    "Status": "3",
    "CreatedTime": "2020-06-09T22:00:42Z",
    "Deadline": "2020-06-11T15:59:59Z",
    "StartTime": "2020-06-09T18:00:00Z",
    "DBClusterId": "pc-*****",
    "DBType": "MySQL",
    "DBVersion": "8.0",
    "ModifiedTime": "2020-06-09T22:00:42Z",
    "TaskType": "DatabaseSoftwareUpgrading",
    "Region": "cn-hangzhou",
    "PrepareInterval": "04:00:00",
    "Id": "111111",
    "SwitchTime": "2020-06-09T22:00:00Z"
  }]
}
```

Error codes

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

22.2.

DescribePendingMaintenanceActions

Queries the numbers of pending events in different task types.

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	No	DescribePendingMaintenanceActions	The operation that you want to perform. Set the value to DescribePendingMaintenanceActions .

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region.  Note If the database engine of the PolarDB cluster is PolarDB for Oracle or the PolarDB for PostgreSQL, this parameter is required. If the database engine of the PolarDB cluster is the PolarDB for MySQL, this parameter is optional.
IsHistory	Integer	No	1	Specifies whether to return the historical tasks. Valid values: • 0: returns the current task. • 1: returns the historical tasks. Default value: 0.

Response parameters

Parameter	Type	Example	Description
RequestId	String	314127C2-B6C1-4F58-B1F6-E6B645*****	The ID of the request.
TypeList	Array of Items		The details of pending events.
TaskType	String	DatabaseSoftwareUpgrading	The task type of pending events. Valid values: • DatabaseSoftwareUpgrading: database software upgrades • DatabaseHardwareMaintenance: hardware maintenance and upgrades • DatabaseStorageUpgrading: database storage upgrades • DatabaseProxyUpgrading: minor version upgrades of the proxy
Count	Integer	1	The number of pending events.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribePendingMaintenanceActions
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribePendingMaintenanceActionsResponse>
<RequestId>314127C2-B6C1-4F58-B1F6-E6B645*****</RequestId>
<TypeList>
  <TaskType>DatabaseSoftwareUpgrading</TaskType>
  <Count>1</Count>
</TypeList>
</DescribePendingMaintenanceActionsResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "314127C2-B6C1-4F58-B1F6-E6B645*****",
  "TypeList" : [ {
    "TaskType" : "DatabaseSoftwareUpgrading",
    "Count" : 1
  } ]
}
```

Error codes

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

22.3. ModifyPendingMaintenanceAction

Modifies the switching time of a pending event.

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
-----------	------	----------	---------	-------------

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyPendingMaintenanceAction	The operation that you want to perform. The operation that you want to perform. Set the value to ModifyPendingMaintenanceAction .
Ids	String	Yes	111111	The ID of the task. You can specify multiple task IDs at a time to modify the switching time of the tasks in a unified manner. The task IDs must be separated with commas (,).
SwitchTime	String	Yes	2020-06-09T22:00:00Z	The time point that you specify for the background to perform the action that corresponds to the pending event. Specify the time in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time must be in UTC.

Response parameters

Parameter	Type	Example	Description
RequestId	String	93061E17-B56A-4324-BC95-D0FFD2*****	The ID of the request.
Ids	String	111111	The ID of the task.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=ModifyPendingMaintenanceAction
&Ids=111111
&SwitchTime=2020-06-09T22:00:00Z
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyPendingMaintenanceActionResponse>
<RequestId>93061E17-B56A-4324-BC95-D0FFD2*****</RequestId>
<Ids>111111</Ids>
</ModifyPendingMaintenanceActionResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "93061E17-B56A-4324-BC95-D0FFD2*****",
  "Ids" : 111111
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	RequiredParam.NotFound	Required input param is not found.	The error message returned because the specified parameter does not exist.
400	TaskModifyError	Part of the tasks cannot be modified.	The error message returned because some tasks cannot be modified. Try again later.
400	SwitchTimeAfterDeadline	The switch time should be earlier than deadline.	The error message returned because the time parameter is invalid. The error message returned because the switching time is not earlier than the deadline.
400	StartTimeBeforeNow	The start time should not be earlier than the current time.	The error message returned because the start time is earlier than the current time.

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

23.Scheduled tasks

23.1. DescribeScheduleTasks

Queries information about all or specified scheduled tasks that you can access.

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	No	DescribeScheduleTasks	The operation that you want to perform. Set the value to DescribeScheduleTasks .
Status	String	No	finish	The state of the tasks that you want to query. Valid values: • pending: The tasks are pending execution. • executing: The tasks are being executed. • failure: The tasks failed and need to be run again. • finish: The tasks are complete. • cancel: The tasks are canceled. • expired: The tasks are expired. The tasks are not started within the time periods that are specified to start the tasks. • rollback: The tasks are being rolled back.  Note If you do not specify this parameter, all scheduled tasks in all states are queried.

Parameter	Type	Required	Example	Description
DBClusterId	String	No	pc-*****	The ID of the cluster on which you want to query the scheduled tasks.  Note - You can call the DescribeDBClusters operation to query information about all your PolarDB clusters that are deployed in a specified region. The returned information includes the ID of each cluster. - If you do not specify this parameter, all scheduled tasks that you can access are queried.
RegionId	String	No	cn-hangzhou	The ID of the region where the type of available resources reside.  Note - You can call the DescribeRegions operation to query the region information of all clusters within a specified account. - If you do not specify this parameter, scheduled tasks on your clusters that are deployed in all regions are queried.
PageNumber	Integer	No	1	The page number of the page to return. The value must be a positive integer that does not exceed the maximum value of the INTEGER data type. Default value: 1.
PageSize	Integer	No	30	The number of entries to return on each page. Valid values: 30, 50, and 100. Default value: 30.

Parameter	Type	Required	Example	Description
TaskAction	String	No	CreateDBNodes	The type of scheduled tasks that you want to query. Valid values: • CreateDBNodes • ModifyDBNodeClass • UpgradeDBClusterVersion • ModifyDBClusterPrimaryZone  Note • If you specify the <code>PlannedStartTime</code> parameter when you call the four preceding operations, the details of each task are returned. Otherwise, an empty string is returned for the <code>TimerInfos</code> parameter. • If you do not specify this parameter, all types of scheduled tasks that you can access are queried.
DBClusterDescription	String	No	testdb	The description of the cluster on which you want to query scheduled tasks.
OrderId	String	No	20951253014****	The ID of the order that is generated when you create the scheduled task.  Note The order ID can contain only digits.

Response parameters

Parameter	Type	Sample response	Description
Message	String	Successful	The returned message that indicates the result of the request.  Note If the request is successful, Successful is returned. If the request fails, an error message that includes an error code is returned.

Parameter	Type	Sample response	Description
Data	Object		The result data that is returned.
TimerInfos	Array of timerInfos		The details of the scheduled task.
Status	String	finish	The state of the scheduled task.
Action	String	CreateDBNodes	The type of the scheduled task.
PlannedEndTime	String	2021-01-28T12:30Z	The latest start time of the task that you specified when you created the scheduled task. The time is displayed in UTC.
PlannedTime	String	2021-01-28T12:16Z	The expected start time of the task. The time is displayed in UTC.
DBClusterId	String	pc-*****	The ID of the cluster on which the scheduled task runs.
Region	String	cn-hangzhou	The ID of the region where the scheduled task runs.
PlannedStartTime	String	2021-01-28T12:00Z	The earliest start time of the task that you specified when you created the scheduled task. The time is displayed in UTC.
TaskId	String	53879cdb-9a00-428e-acaf-ff4cff*****	The ID of the task.
OrderId	String	208161753*****	The ID of the order that is generated when you create the scheduled task.  Note This parameter is returned only if you set the <code>Action</code> parameter to <code>CreateDBNodes</code> or <code>ModifyDBNodeClass</code>.
DbClusterStatus	String	Running	The state of the cluster.

Parameter	Type	Sample response	Description
DbClusterDescription	String	test_cluster	The description of the cluster.
TaskCancel	Boolean	true	Indicates whether the scheduled task can be canceled. Valid values: • true: The task can be canceled. • false: The task cannot be canceled.
TotalRecordCount	Integer	1	The total number of returned entries.
PageNumber	Integer	1	The page number of the page to return.
PageSize	Integer	30	The number of entries returned per page.
Success	Boolean	true	The result of the request.
RequestId	String	936C7025-27A5-4CB1-BB31-540E1F0CCA12	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeScheduleTasks
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeScheduleTasksResponse>
  <Message>Successful</Message>
  <Data>
    <TimerInfos>
      <Status>finish</Status>
      <Action>CreateDBNodes</Action>
      <PlannedEndTime>2021-01-28T12:30Z</PlannedEndTime>
      <PlannedTime>2021-01-28T12:16Z</PlannedTime>
      <DBClusterId>pc-*****</DBClusterId>
      <Region>cn-hangzhou</Region>
      <PlannedStartTime>2021-01-28T12:00Z</PlannedStartTime>
      <TaskId>53879cdb-9a00-428e-acaf-ff4cff*****</TaskId>
      <OrderId>208161753*****</OrderId>
      <DbClusterStatus>Running</DbClusterStatus>
      <DbClusterDescription>test_cluster</DbClusterDescription>
      <TaskCancel>true</TaskCancel>
    </TimerInfos>
    <TotalRecordCount>1</TotalRecordCount>
    <PageNumber>1</PageNumber>
    <PageSize>30</PageSize>
  </Data>
  <Success>true</Success>
  <RequestId>936C7025-27A5-4CB1-BB31-540E1F0CCA12</RequestId>
</DescribeScheduleTasksResponse>
```

JSON **format**

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "Message" : "Successful",
  "Data" : {
    "TimerInfos" : [ {
      "Status" : "finish",
      "Action" : "CreateDBNodes",
      "PlannedEndTime" : "2021-01-28T12:30Z",
      "PlannedTime" : "2021-01-28T12:16Z",
      "DBClusterId" : "pc-*****",
      "Region" : "cn-hangzhou",
      "PlannedStartTime" : "2021-01-28T12:00Z",
      "TaskId" : "53879cdb-9a00-428e-acaf-ff4cff*****",
      "OrderId" : "208161753*****",
      "DbClusterStatus" : "Running",
      "DbClusterDescription" : "test_cluster",
      "TaskCancel" : true
    } ],
    "TotalRecordCount" : 1,
    "PageNumber" : 1,
    "PageSize" : 30
  },
  "Success" : true,
  "RequestId" : "936C7025-27A5-4CB1-BB31-540E1F0CCA12"
}
```

Error codes

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

23.2. CancelScheduleTasks

Cancels a specified scheduled task.

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	No	CancelScheduleTasks	The operation that you want to perform. Set the value to CancelScheduleTasks .

Parameter	Type	Required	Example	Description
DBClusterId	String	Yes	pc-*****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query information about all clusters that are deployed in a specified region, such as the cluster ID.
TaskId	String	Yes	ec8c4723-eac5-4f12-becb-01ac08*****	The ID of the scheduled task to be canceled.  Note - You can call the DescribeScheduleTasks operation to query the details of all scheduled tasks that belong to the current account, such as the task ID. - You can cancel only the tasks whose <code>status</code> is <code>pending</code>.

Response parameters

Parameter	Type	Example	Description
RequestId	String	7F2007D3-7E74-4ECB-89A8-BF130D*****	The ID of the request.
Success	Boolean	true	The result of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=CancelScheduleTasks
&DBClusterId=pc-*****
&TaskId=ec8c4723-eac5-4f12-becb-01ac08*****
&<Common Request Parameters>
```

Sample success responses

XML **format**

```
<CancelScheduleTasksResponse>
  <RequestId>7F2007D3-7E74-4ECB-89A8-BF130D*****</RequestId>
  <Success>true</Success>
</CancelScheduleTasksResponse>
```

JSON **format**

```
{"RequestId": "7F2007D3-7E74-4ECB-89A8-BF130D*****", "Success": "true"}
```

Error codes

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

24.Masking rules

24.1. DescribeMaskingRules

Queries the masking rules that are applied for a PolarDB cluster or the details of a specified masking rule.

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	DescribeMaskingRules	The operation that you want to perform. Set the value to DescribeMaskingRules.
DBClusterId	String	Yes	pc- *****	The ID of the cluster. Note You can call the DescribeDBClusters operation to query the details of the clusters that belong to your Alibaba Cloud account, such as cluster IDs.
RuleNameList	String	No	testrule	The name of the masking rule.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2F83D131-1C18-4599-889D-729A9D*****	The ID of the request.
Message	String	Successful	The message returned for the request. Note If the request is successful, Successful is returned. If the request fails, an exception that contains an error code is returned.

Parameter	Type	Example	Description
Success	Boolean	true	The result of the request.
Data	object		The returned result set.
RuleList	Array of String	<pre>{ "testrule": { "auto": { "databases": [], "tables": [{ "table": "t1", "columns": [{ "column": "c1" }], "applies_to": [{ "table": "t1", "columns": [{ "column": "c1" }], "description": "This rule will be applied to the columns c1 in table t1", "enabled": true }] }] } } }</pre>	The detailed configurations of the masking rule.  Note For more information, see the description of the <code>RuleConfig</code> parameter that is set in the ModifyMaskingRules operation.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeMaskingRules
&DBClusterId=pc-*****
&RuleNameList=testrule
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeMaskingRulesResponse>
<Message>Successful</Message>
<RequestId>2F83D131-1C18-4599-889D-729A9D*****</RequestId>
<Data>
  <RuleList>{
    "testrule": {
      "auto": {
        "databases": [],
        "tables": [
          {
            "table": "t1",
            "columns": [
              {
                "column": "c1"
              }
            ],
            "applies_to": [
              {
                "table": "t1",
                "columns": [
                  {
                    "column": "c1"
                  }
                ],
                "description": "This rule will be applied to the columns c1 in table t1",
                "enabled": true
              }
            ]
          }
        ]
      }
    }
  }
</RuleList>
</Data>
<Success>true</Success>
</DescribeMaskingRulesResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "Message" : "Successful",
  "RequestId" : "2F83D131-1C18-4599-889D-729A9D*****",
  "Data" : {
    "RuleList" : [ "{\"testrule\":{\"auto\":{\"databases\":[],\"tables\":[\"t1\"],\"columns\":[\"c1\"]},\"applies_to\":[],\"description\":\"This rule will be applied to the columns c1 in table t1\",\"enabled\":\"true\"}}" ]
  },
  "Success" : true
}
```

Error codes

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

24.2. ModifyMaskingRules

Configures or adds masking rules.

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	ModifyMaskingRules	The operation that you want to perform. Set the value to ModifyMaskingRules.
DBClusterId	String	Yes	pc- *****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query the details of the clusters that belong to your Alibaba Cloud account, such as cluster IDs.

Parameter	Type	Required	Example	Description
RuleName	String	No	testrule	The name of the masking rule. You can specify only one rule name at a time.  Note - You can call the <code>DescribeMaskingRules</code> operation to query the details of all the masking rules for a specified cluster, such as the names of the masking rules. - If the rule name does not exist in the cluster, the system automatically creates a masking rule based on this name and the value that is set in the <code>RuleConfig</code> parameter.
				The parameter that is used to configure the masking rule that you want to modify and the value in the JSON format. All the parameter values are of the string type. For example, <pre>{ "auto": { "databases": ["db1"], "tables": ["tbl1"], "columns": ["c1,c2"] }, "description": "This rule will be applied to the columns c1 and c2 in table t1", "enabled": true, "applies_to": ["user"] }</pre> Where: <code>"auto"</code>: specifies that the dynamic masking algorithm is supported. This parameter is required. <code>"databases"</code>: This parameter is optional. The names of databases to which the masking rule is applied. You can specify multiple names. Separate the names with commas (.). If you leave this parameter empty, the masking rule applies to all the databases in the cluster. <code>"tables"</code>: This parameter is optional. The names of tables to which the masking rule is applied. You can specify multiple names.

Parameter	Type	Required	Description	Example
RuleConfig	String	No	Separate the names with commas (,). If you leave this parameter empty, the rule applies to all the tables in the cluster. <code>"columns"</code> : This parameter is required. The names of fields to which the masking rule is applied. You can specify multiple field names. Separate the names with commas (,). <code>"description"</code> : This parameter is optional. The description of the masking rule. This parameter is optional. The description must be up to 64 characters in length. <code>"enabled"</code> : This parameter is required. Enables or disables a specified masking rule. Valid values: true (enable) and false (disable). <code>"applies_to"</code> : The names of database accounts to which the masking rule is applied. You can specify multiple account names. Separate the names with commas (,). <code>"exempted"</code> : The names of database accounts to which the masking rule is not applied. You can specify multiple names. Separate the names with commas (,). Note - If the <code>RuleName</code> parameter is set, the <code>RuleConfig</code> parameter is required. - You must select at least <code>"applies_to"</code> or <code>"exempted"</code>.	<pre>{ "databases": ["db1"], "tables": ["tb1"], "columns": ["c1,c2"] }, "description": "This rule will be applied to the columns c1 and c2 in table t1", "enabled": true, "applies_to": ["user"]}</pre>
RuleNameList	String	No	The list of masking rule names. You can specify one or more masking rules at a time. Separate the masking rule names with commas (,). Note You must specify <code>RuleName</code> or <code>RuleNameList</code>.	testrule

Parameter	Type	Required	Example	Description
Enable	String	No	true	Enables or disables specified masking rules. Valid values: • true: enables the masking rules. • false: disables the masking rules.  Note This parameter takes effect only if the <code>RuleNameList</code> parameter is set.

Response parameters

Parameter	Type	Example	Description
RequestId	String	99B355CE-526C-478B-B730-AD9D7C*****	The ID of the request.
Message	String	Message	The message returned for the request.  Note If the request is successful, Successful is returned. If the request fails, an exception that contains an error code is returned.
Success	Boolean	true	The result of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=ModifyMaskingRules
&DBClusterId=pc-*****
&RuleName=testrule
&RuleConfig={"auto": {"databases": ["db1"], "tables": ["tb1"], "columns": ["c1,c2"] }, "description": "This rule will be applied to the columns c1 and c2 in table t1", "enabled": true, "applies_to": ["user"]}
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyMaskingRulesResponse>
<Message>Successful</Message>
<RequestId>99B355CE-526C-478B-B730-AD9D7C*****</RequestId>
<Success>true</Success>
</ModifyMaskingRulesResponse>
```

JSON **format**

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "Message" : "Successful",
  "RequestId" : "99B355CE-526C-478B-B730-AD9D7C*****",
  "Success" : true
}
```

Error codes

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

24.3. DeleteMaskingRules

Deletes one or more specified masking rules.

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	DeleteMaskingRules	The operation that you want to perform. Set the value to DeleteMaskingRules.

Parameter	Type	Required	Example	Description
RuleNameList	String	Yes	testrule	The name of the masking rule that you want to delete. You can specify multiple masking rules at a time. Separate the masking rules with commas (,).  Note You can call the DescribeMaskingRules operation to query details of all the masking rules for a specified cluster, such as the names of the masking rules.
DBClusterId	String	Yes	pc- *****	The ID of the cluster.  Note You can call the DescribeDBClusters operation to query the details of the clusters that belong to your Alibaba Cloud account, such as cluster IDs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2BCEE25B-797C-426B-BA7B-D28CCF*****	The ID of the request.
Message	String	Successful	The message returned for the request.  Note If the request is successful, <code>Successful</code> is returned. If the request fails, an exception that contains an error code is returned.
Success	Boolean	true	The result of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DeleteMaskingRules
&RuleNameList=testrule
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeleteMaskingRulesResponse>
<Message>Successful</Message>
<RequestId>2BCEE25B-797C-426B-BA7B-D28CCF*****</RequestId>
<Success>true</Success>
</DeleteMaskingRulesResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "Message" : "Successful",
  "RequestId" : "2BCEE25B-797C-426B-BA7B-D28CCF*****",
  "Success" : true
}
```

Error codes

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

25. Monitoring management

25.1. DescribeDBNodePerformance

Queries the performance data of a node in a PolarDB cluster.

- The monitoring data is collected once every 5 seconds:
 - If the query time range is less than or equal to 1 hour, the data is displayed at intervals of 5 seconds.
 - If the query time range is less than or equal to 1 day, the data is displayed at intervals of 1 minute.
 - If the query time range is less than or equal to 7 days, the data is displayed at intervals of 10 minutes.
 - If the query time range is less than or equal to 30 days, the data is displayed at intervals of 1 hour.
 - If the query time range is greater than 30 days, the data is displayed at intervals of 1 day.
- The monitoring data is collected once every 60 seconds:
 - If the query time range is less than or equal to 1 day, the data is displayed at intervals of 1 minute.
 - If the query time range is less than or equal to 7 days, the data is displayed at intervals of 10 minutes.
 - If the query time range is less than or equal to 30 days, the data is displayed at intervals of 1 hour.
 - When the query time range is greater than 30 days, the data is displayed at intervals of 1 day.

 **Note** By default, the monitoring data is collected once every 60 seconds. You can call the `ModifyDBClusterMonitor` operation to set the data collection interval to every 5 seconds.

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	No	DescribeDBNodePerformance	The operation that you want to perform. Set the value to DescribeDBNodePerformance .
DBNodeId	String	Yes	pi-*****	The ID of the cluster node.

Parameter	Type	Required	Example	Description
EndTime	String	Yes	2020-09-23T01:01Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time must be in UTC.
Key	String	Yes	PolarDBDiskUsage	The performance indicators that you want to query. Separate multiple indicators with commas (.). For more information, see Performance parameters . Note You can specify a maximum of five performance indicators.
StartTime	String	Yes	2020-09-23T01:00Z	The beginning of the time range to query. Specify the time in the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time must be in UTC.
DBClusterId	String	No	pc-*****	The ID of the cluster.

Response parameters

Parameter	Type	Example	Description
DBNodeId	String	pi-*****	The ID of the cluster node.
DBType	String	MySQL	The type of the database engine.
DBVersion	String	8.0	The version number of the database engine.
EndTime	String	2020-09-23T01:01:00Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time must be in UTC.

Parameter	Type	Example	Description
PerformanceKeys	Array of PerformanceItem		The list of cluster performance indicators.
PerformanceItem			
Measurement	String	PolarDBDiskUsage	The performance indicator.
MetricName	String	mean_sys_dir_size	The name of the metric.
Points	Array of PerformanceItemValue		The array of performance metrics.
PerformanceItemValue			
Timestamp	Long	1600822800000	The timestamp of the metric. This value is a UNIX timestamp. Unit: millisecond.
Value	String	9.33	The value of the metric data.
RequestId	String	E2FDB684-751D-424D-98B9-704BEA*****	The ID of the request.
StartTime	String	2020-09-23T01:00:00Z	The beginning of the time range to query. Specify the time in the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time must be in UTC.

Examples

Sample request

```
http(s)://polardb.aliyuncs.com/? Action=DescribeDBNodePerformance
&DBNodeId=pi-*****
&EndTime=2020-09-23T01:01Z
&Key=PolarDBDiskUsage
&StartTime=2020-09-23T01:00Z
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDBNodePerformanceResponse>
```

```

<PerformanceKeys>
  <PerformanceItem>
    <Measurement>PolarDBDiskUsage</Measurement>
    <MetricName>mean_binlog_size</MetricName>
    <Points>
      <PerformanceItemValue>
        <Value>0.00</Value>
        <Timestamp>1600822800000</Timestamp>
      </PerformanceItemValue>
    </Points>
  </PerformanceItem>
  <PerformanceItem>
    <Measurement>PolarDBDiskUsage</Measurement>
    <MetricName>mean_data_size</MetricName>
    <Points>
      <PerformanceItemValue>
        <Value>42.38</Value>
        <Timestamp>1600822800000</Timestamp>
      </PerformanceItemValue>
    </Points>
  </PerformanceItem>
  <PerformanceItem>
    <Measurement>PolarDBDiskUsage</Measurement>
    <MetricName>mean_log_size</MetricName>
    <Points>
      <PerformanceItemValue>
        <Value>4393.63</Value>
        <Timestamp>1600822800000</Timestamp>
      </PerformanceItemValue>
    </Points>
  </PerformanceItem>
  <PerformanceItem>
    <Measurement>PolarDBDiskUsage</Measurement>
    <MetricName>mean_other_log_size</MetricName>
    <Points>
      <PerformanceItemValue>
        <Value>1.63</Value>
        <Timestamp>1600822800000</Timestamp>
      </PerformanceItemValue>
    </Points>
  </PerformanceItem>
  <PerformanceItem>
    <Measurement>PolarDBDiskUsage</Measurement>
    <MetricName>mean_redolog_size</MetricName>
    <Points>
      <PerformanceItemValue>
        <Value>4096.00</Value>
        <Timestamp>1600822800000</Timestamp>
      </PerformanceItemValue>
    </Points>
  </PerformanceItem>
  <PerformanceItem>
    <Measurement>PolarDBDiskUsage</Measurement>
    <MetricName>mean_sys_dir_size</MetricName>

```

```

        <Points>
            <PerformanceItemValue>
                <Value>9.33</Value>
                <Timestamp>1600822800000</Timestamp>
            </PerformanceItemValue>
        </Points>
    </PerformanceItem>
    <PerformanceItem>
        <Measurement>PolarDBDiskUsage</Measurement>
        <MetricName>mean_tmp_dir_size</MetricName>
        <Points>
            <PerformanceItemValue>
                <Value>0.00</Value>
                <Timestamp>1600822800000</Timestamp>
            </PerformanceItemValue>
        </Points>
    </PerformanceItem>
    <PerformanceItem>
        <Measurement>PolarDBDiskUsage</Measurement>
        <MetricName>mean_undolog_size</MetricName>
        <Points>
            <PerformanceItemValue>
                <Value>296.00</Value>
                <Timestamp>1600822800000</Timestamp>
            </PerformanceItemValue>
        </Points>
    </PerformanceItem>
</PerformanceKeys>
<DBVersion>8.0</DBVersion>
<RequestId>E2FDB684-751D-424D-98B9-704BEA*****</RequestId>
<EndTime>2020-09-23T01:01:00Z</EndTime>
<StartTime>2020-09-23T01:00:00Z</StartTime>
<DBNodeId>pi-*****</DBNodeId>
<DBType>MySQL</DBType>
</DescribeDBNodePerformanceResponse>

```

JSON format

```

{
  "PerformanceKeys": {
    "PerformanceItem": [
      {
        "Measurement": "PolarDBDiskUsage",
        "MetricName": "mean_binlog_size",
        "Points": {
          "PerformanceItemValue": [
            {
              "Value": "0.00",
              "Timestamp": 1600822800000
            }
          ]
        }
      }
    ]
  },
  "DBVersion": "8.0",
  "RequestId": "E2FDB684-751D-424D-98B9-704BEA*****",
  "EndTime": "2020-09-23T01:01:00Z",
  "StartTime": "2020-09-23T01:00:00Z",
  "DBNodeId": "pi-*****",
  "DBType": "MySQL"
}

```

```

    "Measurement": "PolarDBDiskUsage",
    "MetricName": "mean_data_size",
    "Points": {
      "PerformanceItemValue": [
        {
          "Value": "42.38",
          "Timestamp": 1600822800000
        }
      ]
    }
  },
  {
    "Measurement": "PolarDBDiskUsage",
    "MetricName": "mean_log_size",
    "Points": {
      "PerformanceItemValue": [
        {
          "Value": "4393.63",
          "Timestamp": 1600822800000
        }
      ]
    }
  },
  {
    "Measurement": "PolarDBDiskUsage",
    "MetricName": "mean_other_log_size",
    "Points": {
      "PerformanceItemValue": [
        {
          "Value": "1.63",
          "Timestamp": 1600822800000
        }
      ]
    }
  },
  {
    "Measurement": "PolarDBDiskUsage",
    "MetricName": "mean_redolog_size",
    "Points": {
      "PerformanceItemValue": [
        {
          "Value": "4096.00",
          "Timestamp": 1600822800000
        }
      ]
    }
  },
  {
    "Measurement": "PolarDBDiskUsage",
    "MetricName": "mean_sys_dir_size",
    "Points": {
      "PerformanceItemValue": [
        {
          "Value": "9.33",

```

```

        "Timestamp": 1600822800000
      }
    ]
  },
  {
    "Measurement": "PolarDBDiskUsage",
    "MetricName": "mean_tmp_dir_size",
    "Points": {
      "PerformanceItemValue": [
        {
          "Value": "0.00",
          "Timestamp": 1600822800000
        }
      ]
    }
  },
  {
    "Measurement": "PolarDBDiskUsage",
    "MetricName": "mean_undolog_size",
    "Points": {
      "PerformanceItemValue": [
        {
          "Value": "296.00",
          "Timestamp": 1600822800000
        }
      ]
    }
  }
]
},
"DBVersion": "8.0",
"RequestId": "E2FDB684-751D-424D-98B9-704BEA*****",
"EndTime": "2020-09-23T01:01:00Z",
"StartTime": "2020-09-23T01:00:00Z",
"DBNodeId": "pi-*****",
"DBType": "MySQL"
}

```

Error codes

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

25.2. DescribeDBClusterMonitor

Queries the interval for collecting monitoring data of a PolarDB cluster.

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	No	DescribeDBClusterMonitor	The operation that you want to perform. Set the value to DescribeDBClusterMonitor .
DBClusterId	String	Yes	pc-*****	The ID of the PolarDB cluster.

Response parameters

Parameter	Type	Example	Description
Period	String	60	The interval at which monitoring data is collected. Unit: seconds.
RequestId	String	593AE1C5-B70C-463F-9207-074639*****	The ID of the request.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/? Action=DescribeDBClusterMonitor
&DBClusterId=pc-*****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDBClusterMonitorResponse>
  <RequestId>593AE1C5-B70C-463F-9207-074639*****</RequestId>
  <Period>60</Period>
</DescribeDBClusterMonitorResponse>
```

JSON format

```
{
  "RequestId": "593AE1C5-B70C-463F-9207-074639*****",
  "Period": "60"
}
```

Error codes

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

25.3. DescribeDBClusterPerformance

Queries the performance data of a PolarDB cluster.

- The monitoring data is collected once every 5 seconds:
 - If the query time range is less than or equal to 1 hour, the data is displayed at intervals of 5 seconds.
 - If the query time range is less than or equal to one day, the data is displayed at intervals of 1 minute.
 - If the query time range is less than or equal to seven days, the data is displayed at intervals of 10 minutes.
 - If the query time range is less than or equal to 30 days, the data is displayed at intervals of 1 hour.
 - When the query time range is greater than 30 days, the data is displayed at intervals of 1 day.
- The monitoring data is collected once every 60 seconds:
 - If the query time range is less than or equal to one day, the data is displayed at intervals of 1 minute.
 - If the query time range is less than or equal to seven days, the data is displayed at intervals of 10 minutes.
 - If the query time range is less than or equal to 30 days, the data is displayed at intervals of 1 hour.
 - When the query time range is greater than 30 days, the data is displayed at intervals of 1 day.

 **Note** By default, the monitoring data is collected once every 60 seconds. You can call the `ModifyDBClusterMonitor` operation to set the data collection interval to every 5 seconds.

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	No	DescribeDBClusterPerformance	The operation that you want to perform. Set the value to DescribeDBClusterPerformance .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
EndTime	String	Yes	2020-09-23T01:00Z	The end of the time range to query. The time is in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time is displayed in UTC.

Parameter	Type	Required	Example	Description
Key	String	Yes	PolarDBDiskUsage	The performance indicators that you want to query. Separate multiple indicators with commas (.). For more information, see Performance parameters.  Note You can specify a maximum of five performance indicators.
StartTime	String	Yes	2020-09-23T01:01Z	The beginning of the time range to query. Specify the time in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time must be in UTC.

Response parameters

Parameter	Type	Example	Description
DBClusterId	String	pc-*****	The ID of the cluster.
DBType	String	MySQL	The type of the database engine.
DBVersion	String	8.0	The version number of the database engine.
EndTime	String	2020-09-23T01:01:00Z	The end of the time range to query. Specify the time in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time must be in UTC.
PerformanceKeys	Array of PerformanceItem		The list of cluster performance items.
PerformanceItem			
DBNodeId	String	pi-*****	The ID of the cluster node.  Note The value of this parameter is not returned if <code>Key</code> is set to <code>PolarDBDiskUsage</code>.

Parameter	Type	Example	Description
Measurement	String	PolarDBDiskUsage	The performance indicator.
MetricName	String	mean_data_size	The name of the metric.
Points	Array of PerformanceItemValue		The array of performance metrics.
PerformanceItemValue			
Timestamp	Long	1600822800000	The timestamp of the metric. This value is a timestamp. Unit: milliseconds.
Value	String	42.38	The value of the metric data.
RequestId	String	35D3E3DA-4650-407A-BFF5-59BFF1*****	The ID of the request.
StartTime	String	2020-09-23T01:00:00Z	The beginning of the time range to query. Specify the time in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time must be in UTC.

Examples

Sample request

```
http(s)://polardb.aliyuncs.com/? Action=DescribeDBClusterPerformance
&DBClusterId=pc-*****
&EndTime=2020-09-23T01:00Z
&Key=PolarDBDiskUsage
&StartTime=2020-09-23T01:01Z
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDBClusterPerformanceResponse>
  <PerformanceKeys>
    <PerformanceItem>
      <Measurement>PolarDBDiskUsage</Measurement>
      <MetricName>mean_binlog_size</MetricName>
      <Points>
        <PerformanceItemValue>
```

```

        <value>0.00</value>
        <Timestamp>1600822800000</Timestamp>
    </PerformanceItemValue>
</Points>
</PerformanceItem>
<PerformanceItem>
    <Measurement>PolarDBDiskUsage</Measurement>
    <MetricName>mean_data_size</MetricName>
    <Points>
        <PerformanceItemValue>
            <Value>42.38</Value>
            <Timestamp>1600822800000</Timestamp>
        </PerformanceItemValue>
    </Points>
</PerformanceItem>
<PerformanceItem>
    <Measurement>PolarDBDiskUsage</Measurement>
    <MetricName>mean_log_size</MetricName>
    <Points>
        <PerformanceItemValue>
            <Value>4393.63</Value>
            <Timestamp>1600822800000</Timestamp>
        </PerformanceItemValue>
    </Points>
</PerformanceItem>
<PerformanceItem>
    <Measurement>PolarDBDiskUsage</Measurement>
    <MetricName>mean_other_log_size</MetricName>
    <Points>
        <PerformanceItemValue>
            <Value>1.63</Value>
            <Timestamp>1600822800000</Timestamp>
        </PerformanceItemValue>
    </Points>
</PerformanceItem>
<PerformanceItem>
    <Measurement>PolarDBDiskUsage</Measurement>
    <MetricName>mean_redolog_size</MetricName>
    <Points>
        <PerformanceItemValue>
            <Value>4096.00</Value>
            <Timestamp>1600822800000</Timestamp>
        </PerformanceItemValue>
    </Points>
</PerformanceItem>
<PerformanceItem>
    <Measurement>PolarDBDiskUsage</Measurement>
    <MetricName>mean_sys_dir_size</MetricName>
    <Points>
        <PerformanceItemValue>
            <Value>11.47</Value>
            <Timestamp>1600822800000</Timestamp>
        </PerformanceItemValue>
    </Points>
</PerformanceItem>

```

```

    <PerformanceItem>
      <Measurement>PolarDBDiskUsage</Measurement>
      <MetricName>mean_tmp_dir_size</MetricName>
      <Points>
        <PerformanceItemValue>
          <Value>0.00</Value>
          <Timestamp>1600822800000</Timestamp>
        </PerformanceItemValue>
      </Points>
    </PerformanceItem>
    <PerformanceItem>
      <Measurement>PolarDBDiskUsage</Measurement>
      <MetricName>mean_undolog_size</MetricName>
      <Points>
        <PerformanceItemValue>
          <Value>296.00</Value>
          <Timestamp>1600822800000</Timestamp>
        </PerformanceItemValue>
      </Points>
    </PerformanceItem>
  </PerformanceKeys>
  <DBVersion>8.0</DBVersion>
  <RequestId>35D3E3DA-4650-407A-BFF5-59BFF1*****</RequestId>
  <EndTime>2020-09-23T01:01:00Z</EndTime>
  <DBClusterId>pc-*****</DBClusterId>
  <StartTime>2020-09-23T01:00:00Z</StartTime>
  <DBType>MySQL</DBType>
</DescribeDBClusterPerformanceResponse>

```

JSON format

```

{
  "PerformanceKeys": {
    "PerformanceItem": [
      {
        "Measurement": "PolarDBDiskUsage",
        "MetricName": "mean_binlog_size",
        "Points": {
          "PerformanceItemValue": [
            {
              "Value": "0.00",
              "Timestamp": 1600822800000
            }
          ]
        }
      },
      {
        "Measurement": "PolarDBDiskUsage",
        "MetricName": "mean_data_size",
        "Points": {
          "PerformanceItemValue": [
            {
              "Value": "42.38",

```

```

        "Timestamp": 1600822800000
      }
    ]
  },
  {
    "Measurement": "PolarDBDiskUsage",
    "MetricName": "mean_log_size",
    "Points": {
      "PerformanceItemValue": [
        {
          "Value": "4393.63",
          "Timestamp": 1600822800000
        }
      ]
    }
  },
  {
    "Measurement": "PolarDBDiskUsage",
    "MetricName": "mean_other_log_size",
    "Points": {
      "PerformanceItemValue": [
        {
          "Value": "1.63",
          "Timestamp": 1600822800000
        }
      ]
    }
  },
  {
    "Measurement": "PolarDBDiskUsage",
    "MetricName": "mean_redolog_size",
    "Points": {
      "PerformanceItemValue": [
        {
          "Value": "4096.00",
          "Timestamp": 1600822800000
        }
      ]
    }
  },
  {
    "Measurement": "PolarDBDiskUsage",
    "MetricName": "mean_sys_dir_size",
    "Points": {
      "PerformanceItemValue": [
        {
          "Value": "11.47",
          "Timestamp": 1600822800000
        }
      ]
    }
  },
  {
    "Measurement": "PolarDBDiskUsage"
  }
}

```

```

    "Measurement": "PolarDBDiskUsage",
    "MetricName": "mean_tmp_dir_size",
    "Points": {
      "PerformanceItemValue": [
        {
          "Value": "0.00",
          "Timestamp": 1600822800000
        }
      ]
    }
  },
  {
    "Measurement": "PolarDBDiskUsage",
    "MetricName": "mean_undolog_size",
    "Points": {
      "PerformanceItemValue": [
        {
          "Value": "296.00",
          "Timestamp": 1600822800000
        }
      ]
    }
  }
]
},
"DBVersion": "8.0",
"RequestId": "35D3E3DA-4650-407A-BFF5-59BFF1*****",
"EndTime": "2020-09-23T01:01:00Z",
"DBClusterId": "pc-*****",
"StartTime": "2020-09-23T01:00:00Z",
"DBType": "MySQL"
}

```

Error codes

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

25.4. DescribeDBProxyPerformance

Queries the performance data of PolarProxy.

 **Note** Only PolarDB for MySQL databases support this operation.

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	DescribeDBProxyPerformance	The operation that you want to perform. The operation that you want to perform. Set the value to DescribeDBProxyPerformance .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
Key	String	Yes	PolarProxy_CpuUsage	The performance metrics that you want to query. Separate multiple indicators with commas (.). For more information, see Performance parameters .
StartTime	String	Yes	2020-09-23T01:01Z	The beginning of the time range to query. Specify the time in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time must be in UTC.
EndTime	String	Yes	2020-09-24T02:08Z	The end of the time range to query. Specify the time in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time must be in UTC.

Response parameters

Parameter	Type	Example	Description
PerformanceKeys	Array of PerformanceItem		The list of cluster performance items.
PerformanceItem			
MetricName	String	service_connections_ps	The name of the performance metric.
Measurement	String	PolarProxy_CpuUsage	The performance metric.
Points	Array of PerformanceItemValue		Details about the performance metric.
PerformanceItemValue			

Parameter	Type	Example	Description
Value	String	10	The value of the metric.
Timestamp	Long	1600822800000	The time when the metric value was collected. This value is a timestamp that represents the number of milliseconds that have elapsed since the epoch time January 1, 1970, 00:00:00 UTC.
DBNodeid	String	pi-*****	The ID of the cluster node.
DBVersion	String	8.0	The version of the database engine.
EndTime	String	2020-09-23T01:01:00Z	The end of the time range. The time is in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time is displayed in UTC.
RequestId	String	35D3E3DA-4650-407A-BFF5-59BFF1*****	The ID of the request.
StartTime	String	2020-09-23T01:00:00Z	The beginning of the time range. The time is in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time is displayed in UTC.
DBClusterId	String	pc-*****	The ID of the PolarDB cluster.
DBType	String	MySQL	The database engine that databases in the clusters run.

Examples

Sample requests

```
http(s)://polardb.aliyuncs.com/?Action=DescribeDBProxyPerformance
&DBClusterId=pc-*****
&Key=PolarProxy_CpuUsage
&StartTime=2020-09-23T01:01Z
&EndTime=2020-09-24T02:08Z
&<Common request parameters>
```

Sample success responses

XML format

```

HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDBProxyPerformanceResponse>
  <PerformanceKeys>
    <MetricName>service_connections_ps</MetricName>
    <Measurement>PolarProxy_CpuUsage</Measurement>
    <Points>
      <Value>10</Value>
      <Timestamp>1600822800000</Timestamp>
    </Points>
    <DBNodeId>pi-*****</DBNodeId>
  </PerformanceKeys>
  <DBVersion>8.0</DBVersion>
  <EndTime>2020-09-23T01:01:00Z</EndTime>
  <RequestId>35D3E3DA-4650-407A-BFF5-59BFF1*****</RequestId>
  <StartTime>2020-09-23T01:00:00Z</StartTime>
  <DBClusterId>pc-*****</DBClusterId>
  <DBType>MySQL</DBType>
</DescribeDBProxyPerformanceResponse>

```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "PerformanceKeys" : [ {
    "MetricName" : "service_connections_ps",
    "Measurement" : "PolarProxy_CpuUsage",
    "Points" : [ {
      "Value" : "10",
      "Timestamp" : 1600822800000
    } ],
    "DBNodeId" : "pi-*****"
  } ],
  "DBVersion" : "8.0",
  "EndTime" : "2020-09-23T01:01:00Z",
  "RequestId" : "35D3E3DA-4650-407A-BFF5-59BFF1*****",
  "StartTime" : "2020-09-23T01:00:00Z",
  "DBClusterId" : "pc-*****",
  "DBType" : "MySQL"
}

```

Error codes

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

25.5. ModifyDBClusterMonitor

Modifies the interval for collecting monitoring data of a PolarDB cluster.

- The monitoring data is collected once every 5 seconds:

- If the query time range is less than or equal to 1 hour, the data is displayed at intervals of 5 seconds.
 - If the query time range is less than or equal to 1 day, the data is displayed at intervals of 1 minute.
 - If the query time range is less than or equal to 7 days, the data is displayed at intervals of 10 minutes.
 - If the query time range is less than or equal to 30 days, the data is displayed at intervals of 1 hour.
 - If the query time range is greater than 30 days, the data is displayed at intervals of 1 day.
- The monitoring data is collected once every 60 seconds:
 - If the query time range is less than or equal to 1 day, the data is displayed at intervals of 1 minute.
 - If the query time range is less than or equal to 7 days, the data is displayed at intervals of 10 minutes.
 - If the query time range is less than or equal to 30 days, the data is displayed at intervals of 1 hour.
 - When the query time range is greater than 30 days, the data is displayed at intervals of 1 day.

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	No	ModifyDBClusterMonitor	The operation that you want to perform. Set the value to ModifyDBClusterMonitor .
DBClusterId	String	Yes	pc-*****	The ID of the cluster.
Period	String	Yes	5	The interval at which monitoring data is collected. Valid values: 5 or 60. Unit: seconds.

Response parameters

Parameter	Type	Example	Description
RequestId	String	75B92353-73B4-447B-8477-C85F3C*****	The ID of the request.

Examples

Sample request

```
http(s)://polardb.aliyuncs.com/? Action=ModifyDBClusterMonitor
&DBClusterId=pc-*****
&Period=5
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDBClusterMonitorResponse>
  <RequestId>75B92353-73B4-447B-8477-C85F3C*****</RequestId>
</ModifyDBClusterMonitorResponse>
```

JSON format

```
{
  "RequestId": "75B92353-73B4-447B-8477-C85F3C*****"
}
```

Error codes

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

26.Appendixes

26.1. 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.ClusterNotFound	The specified DB Cluster does not exist.	404
Forbidden.RAM	The user is not authorized to operate the specified resource, or this operation does not support RAM.	403
Forbidden.NotSupportRAM	This action does not support accessed by RAM mode.	403

Error code	Error message	HTTP status code
Forbidden.RiskControl	This operation is forbidden by Aliyun Risk Control system.	403
InsufficientBalance	Your account does not have enough balance.	400
Forbidden.Authentication	This operation is forbidden by Aliyun Realname Authentication system.	403
Invalid<parameter name>.ValueNotSupported	The specified parameter "parameter name" is not valid.	400
Invalid<parameter name>.Malformed	The specified parameter "parameter name n" is not valid.	400
InvalidParameter	The specified parameter "parameter name n" is not valid.	400

Specific errors

Error code	Error message	HTTP status code
InvalidRegionId.NotFound	The DBClusterId provided does not exist in our records.	404
InvalidSecurityIPs.Duplicate	The Security IP address is not in the available range or occupied.	400
InvalidSecurityIPsLength.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
OperationDenied	The resource is out of usage.	403
RegionUnauthorized	There is no authority to create Cluster in the specified region.	403
QuotaExceeded.CreateDBCluster	The quota of create Cluster exceeds.	403
InvalidDBClusterId.NotFound	The specified DBClusterId does not exist.	404
OperationDenied.DBClusterStatus	The operation is not permitted due to Cluster status.	403

Error code	Error message	HTTP status code
InvalidConnectionString.Prefix.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 Cluster.	403
InvalidSecurityIps.Duplicate	The quota of security ip exceeds.	400
OperationDenied.CurrentEngineVersion	The operation is not permitted due to specified current version.	400
QuotaExceeded.DBName	The quota of db exceeds.	400
InvalidDBName.Duplicate	The specified DB name is invalid or already exists.	400
InvalidParameter.Keyword	The specified DBName is a reserved keyword.	400
OperationDenied.DBStatus	The status of the database does not support this operation.	403
OperationDenied.DBClusterEngine	The operation is not permitted due to engine of Cluster.	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
InvalidTaskId.NotFound	The ImportId provided does not exist in our records.	400
OperationDenied.IncorrectTaskStatus	The operation is not permitted due to status of import.	403
InvalidAccountName.keyword	The specified AccountName is a reserved keyword.	400
InvalidAccountName.Duplicate	The specified AccountName already exists.	400
QuotaExceeded.AccountName	The quota of account exceeds.	403

Error code	Error message	HTTP status code
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.NoFoundBackup	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
Forbidden.Authentication	The operation is forbidden by Aliyun Realname Authentication System.	403
IncorrectVpcId.Mismatch	The specified parameter "VpcId" is not valid.	400
IntranetNetTypeNotExists	Current DB Cluster net type does not support this operation.	404
InvalidDBCluster.NotFound	The DBClusterId provided does not exist in our records.	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

Error code	Error message	HTTP status code
InvalidCurrentConnectionString.NotFound	Specified current connection string doesn't exist.	400
InvalidDBClusterId.NotFound	The specified DBClusterId does not exist.	400
InvalidDBClusterNetType.NotFound	The Specified DB Cluster net type is not found.	404
InvalidEngineVersion.Malformed	The specified parameter "EngineVersion" is not valid.	400
InvalidClusterNetworkType.ValueNotSupported	The specified parameter "ClusterNetworkType" is not valid.	400
InvalidPort.Malformed	Specified port is not valid.	400
InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	400
InvalidPrivateIpAddress.Mismatch	Specified private IP address is not in the CIDR block of virtual switch.	400
InvalidVPCId.NotFound	The specified connection string or port does not match the current network type.	400
InvalidVSwitchId.Mismatch	Specified Cluster 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.DBClusterNetType	The network type of the specified Cluster does not support this operation.	403
OperationDenied.LockMode	The Cluster is locked.	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 cloudClusterIp is use, please check params.	406
OperationDenied	The vpc service is error, please check params.	400
PublicConnectionExists	PublicConnection exists.	403

Error code	Error message	HTTP status code
IncorrectDBClusterState	CurrentDB Cluster state does not support this operation.	403
IncorrectDBClusterLockMode	CurrentDB Cluster lock mode does not support this operation.	400
EngineVersionNotSupported	EngineVersion specified cannot be replicate with the source DB Cluster.	400
EngineNotSupported	Engine specified cannot be supported the operation..	400

26.2. Cluster status

This topic describes multiple states of clusters.

State	Description
Creating	The cluster is being created.
Running	The cluster is running.
Deleting	The cluster is being released.
Deleted	The cluster has been deleted.
Rebooting	The cluster is being restarted.
INS_MAINTAINING	The cluster is under maintenance.
Switching	The service is failing over from the primary node to a read-only node.
DBNodeCreating	A node is being added.
DBNodeDeleting	A node is being deleted.
ClassChanging	The node specifications are being changed.
NetAddressCreating	The endpoint is being created.
NetAddressDeleting	The endpoint is being deleted.
NetAddressModifying	The endpoint is being modified.
MinorVersionUpgrading	The kernel version of the cluster is upgrading.
STORAGE_EXPANDIN	The disk capacity is expanding.
UPGRADE_FORBIDDEN	The upgrade is temporarily prohibited.

State	Description
TRANSING	The cluster is being migrated across zones.
SSL_MODIFYING	The SSL certificate is being enabled or disabled.
TDEModifying	The TDE feature is being enabled.
CONFIG_SWITCHING	The configurations of the custom cluster endpoint is being modified.
ROLE_SWITCHING	The role of the custom cluster endpoint is being switched.

26.3. Character set tables

This topic describes character set tables that are supported by .

Character sets supported by PolarDB for MySQL

Character set	Character set
utf8	geostd8
gbk	greek
utf8mb4	hebrew
latin1	hp8
euckr	keybcs2
armscii8	koi8r
ascii	koi8u
big5	latin2
binary	latin5
cp1250	latin7
cp1251	macce
cp1256	macroman
cp1257	sjis
cp850	swe7
cp852	tis620
cp866	ucs2

Character set	Character set
cp932	ujis
dec8	utf16
eucjpms	utf16le
gb2312	utf32

Character sets supported by PolarDB PostgreSQL and PolarDB for Oracle

Character set	Character set	Character set
sql_ascii	latin5	win866
euc_jp	latin6	win874
euc_cn	latin7	win1250
euc_kr	latin8	win1251
euc_tw	latin9	win1252
euc_jis_2004	latin10	win1253
utf8	koi8r	win1254
mule_internal	koi8u	win1255
latin1	iso_8859_5	win1256
latin2	iso_8859_6	win1257
latin3	iso_8859_7	win1258
latin4	iso_8859_8	

26.4. Performance metric monitoring

This topic describes the performance metric of PolarDB clusters that are monitored.

Performance metrics of PolarDB for MySQL clusters

Performance metric	Metric	Data type	Unit	Description
	mean_data_size	double	MB	The storage space occupied by the data.

Performance metric	Metric	Data type	Unit	Description
PolarDBDiskUsage	mean_log_size	double	MB	The storage space occupied by logs.
	mean_sys_dir_size	double	MB	The storage space occupied by the system.
	mean_tmp_dir_size	double	MB	The storage space occupied by temporary files.
	mean_redolog_size	double	MB	The storage space occupied by redo logs.
	mean_binlog_size	double	MB	The storage space occupied by binary logs.
	mean_other_log_size	double	MB	The size of other logs.
	mean_undolog_size	double	MB	The storage space used by undo logs.
PolarDBQPSTPS	mean_qps	double	N/A	The number of requests per second.
	mean_tps	double	N/A	The number of transactions per second.
	mean_mps	double	N/A	The number of operations per second.
PolarDBCPU	cpu_ratio	double	Percentage	The CPU utilization (%).
PolarDBMemory	mem_ratio	double	Percentage	The memory usage (%).
PolarDBConnections	mean_active_session	double	N/A	The number of active connections.
	mean_total_session	double	N/A	The total number of current connections.
PolarDBNetworkTraffic	mean_input_traffic	double	KB/s	The amount of inbound network traffic per second.
	mean_output_traffic	double	KB/s	The amount of outbound network traffic per second.
	mean_innodb_buffer_dirty_ratio	double	Percentage	The dirty ratio (%) in the buffer pool.

PolarDBInnoDBBufferRatio Performance metric	Metric	Data type	Unit	Description
	mean_innodb_buffer_read_hit	double	Percentage	The read hit ratio (%) of the buffer pool.
	mean_innodb_buffer_use_ratio	double	Percentage	The utilization (%) of the buffer pool.
PolarDBInnoDBDataReadWrite	mean_innodb_data_read	double	Byte	The amount of data that is read from the storage engine per second.
	mean_innodb_data_written	double	Byte	The amount of data that is written to the storage engine per second.
PolarDBInnoDBBufferRequests	mean_innodb_buffer_pool_read_requests	double	N/A	The number of reads from the buffer pool per second.
	mean_innodb_buffer_pool_write_requests	double	N/A	The number of writes to the buffer pool per second.
PolarDBInnoDBLogWrites	mean_innodb_log_write_requests	double	N/A	The number of physical writes to the log per second.
	mean_innodb_os_log_fsyncs	double	N/A	The number of synchronizations per second.
PolarDBCreatedTempDiskTable	mean_created_tmp_disk_tables	double	N/A	The number of temporary tables created per second.
PolarDBCOMDML	mean_com_delete	double	N/A	The number of DELETE statements executed per second.
	mean_com_delete_multi	double	N/A	The number of Multi-DELETE statements executed per second.
	mean_com_insert	double	N/A	The number of INSERT statements executed per second.
	mean_com_insert_select	double	N/A	The number of INSERT_SELECT statements executed per second.
	mean_com_replace	double	N/A	The number of REPLACE statements executed per second.
	mean_com_replace_select	double	N/A	The number of REPLACE_SELECT statements executed per second.

Performance metric	Metric	Data type	Unit	Description
	mean_com_select	double	N/A	The number of SELECT statements executed per second.
	mean_com_update	double	N/A	The number of UPDATE statements executed per second.
	mean_com_update_multi	double	N/A	The number of Multi-UPDATE statements executed per second.
PolarDBRowDML	mean_innodb_rows_deleted	double	N/A	The number of rows deleted per second.
	mean_innodb_rows_inserted	double	N/A	The number of rows inserted per second.
	mean_innodb_rows_read	double	N/A	The number of rows read per second.
	mean_innodb_rows_updated	double	N/A	The number of rows updated per second.
PolarDBIOSTAT	mean_iops_r	double	N/A	The read IOPS.
	mean_iops_w	double	N/A	The write IOPS.
	mean_iops	double	N/A	The total IOPS.
	mean_io_throughput_r	double	MB	The read I/O throughput.
	mean_io_throughput_w	double	MB	The write I/O throughput.
	mean_io_throughput	double	MB	The total I/O throughput.
PolarDBReplicaLag	mean_replication_delay	double	Second	The replication latency.

Performance metrics of PolarDB for PostgreSQL and PolarDB for Oracle clusters

Performance metric	Metric	Data type	Unit	Description
	mean_total_session	double	N/A	The number of current connections.

Performance metric	Metric	Data type	Unit	Description
PolarDBConnections	mean_active_session	double	N/A	The number of active connections.
	mean_waiting_connection	double	N/A	The number of pending connections.
	mean_idle_connection	double	N/A	The number of idle connections.
PolarDBRowDML	mean_tup_returned_delta	double	N/A	The number of rows returned per second in the full table scan result.
	mean_tup_fetched_delta	double	N/A	The number of rows returned per second in the index scan and secondary index result.
	mean_tup_inserted_delta	double	N/A	The number of rows inserted per second.
	mean_tup_updated_delta	double	N/A	The number of rows updated per second.
	mean_tup_deleted_delta	double	N/A	The number of rows deleted per second.
PolarDBTransaction	mean_active_transactions	double	N/A	The number of transactions in the active state.
	mean_waiting_transactions	double	N/A	The number of pending transactions.
	mean_idle_transactions	double	N/A	The number of idle transactions.
	mean_long_idle_transactions	double	N/A	The number of idle long-running transactions.
	mean_long_transactions	double	N/A	The number of long-running transactions.
	mean_two_pc_transactions	double	N/A	The number of XA transactions.
	mean_long_two_pc_transactions	double	N/A	The number of long-running XA transactions.
	mean_tps	double	N/A	The number of transactions per second.

Performance metric	Metric	Data type	Unit	Description
PolarDBQPSTPS	mean_commits_delta	double	N/A	The number of transactions committed per second.
	mean_rollbacks_delta	double	N/A	The number of transactions rolled back per second.
	mean_deadlocks_delta	double	N/A	The number of deadlocks per second.
PolarDBBuffer	mean_blks_read_delta	double	N/A	The number of block reads per second.
	mean_blks_hit_delta	double	N/A	The number of block hits per second.
	mean_hit_ratio	double	Percentage	The block hit ratio.
	mean_buffers_clean	double	N/A	The cumulative number of buffers written by the background writer during checkpoints.
	mean_buffers_backend	double	N/A	The cumulative number of buffers written by a backend.
	mean_buffers_backend_fsync	double	N/A	The cumulative number of backend fsync calls.
	mean_buffers_alloc	double	N/A	The cumulative number of allocated buffers.
PolarDBVacuum	mean_db_age	double	xids	The difference between the current transaction ID and the earliest transaction ID that cannot be recycled.
PolarDBTemp	mean_temp_files	double	N/A	The number of temporary files generated per second.
	mean_temp_bytes	double	Bytes	The amount of temporary file data generated per second.
PolarDBCPU	cpu_ratio	double	Percentage	The CPU utilization.
	cpu_user_ratio	double	Percentage	The CPU utilization in the user state.

Performance metric	Metric	Data type	Unit	Description
	cpu_sys_ratio	double	Percentage	The CPU utilization in the system state.
PolarDBMemory	mem_ratio	double	Percentage	The memory usage.
PolarDBDiskUsage	mean_ins_total_size	double	MB	The used PolarStore space of the instance.
	mean_data_size	double	MB	The used PolarStore space of user data.
	mean_wal_size	double	MB	The used PolarStore space of Write-Ahead Logging (WAL) logs.
	mean_tmp_size	double	MB	The used temporary space.
	mean_log_size	double	MB	The used space of local logs.
PolarDBIOSTAT	mean_iops_r	double	N/A	The read IOPS.
	mean_iops_w	double	N/A	The write IOPS.
	mean_iops	double	N/A	The total IOPS.
	mean_io_throughput_r	double	MB	The read I/O throughput.
	mean_io_throughput_w	double	MB	The write I/O throughput.
	mean_io_throughput	double	MB	The total I/O throughput.

Performance metrics of PolarProxy

Performance metric	Metric	Data type	Unit	Description
PolarProxy_CpuUsage	docker_container_cpu	double	Percentage	The CPU utilization on PolarProxy.
PolarProxy_Cps	service_connections_ps	double	N/A	The number of new connections per second on PolarProxy.
PolarProxy_CurrentConnections	service_current_connections	double	N/A	The number of current connections on PolarProxy.

Performance metric	Metric	Data type	Unit	Description
PolarProxy_UpFlows	service_upstream_netflow	double	KB/s	The amount of inbound network traffic per second on PolarProxy.
PolarProxy_DownFlows	service_downstream_netflow	double	KB/s	The amount of outbound network traffic per second on PolarProxy.
PolarProxy_Qps	service_queries	double	N/A	The number of requests per second on PolarProxy.