# Alibaba Cloud ApsaraDB for Redis

## API Reference

Issue: 20190819

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# Generic conventions

Table -1: Style conventions

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

| Style | Description | Example |
| --- | --- | --- |
| {} or {a\|b} | It indicates that it is a required value, and only one item can be selected. | `swich {stand \| slave}` |

# Contents

# 1 RAM authorization

Resource Access Management (RAM) allows you to grant access of resources under an account to RAM users. Skip this section if you do not need to use RAM.

## Resources available for authorization

Only one type of ApsaraDB for Redis resources can be authorized in RAM: Instance.

The following table shows how to describe resources to be authorized in RAM.

| Resource type | Resource description in authorization policy |
| --- | --- |
| Instance | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid  acs : kvstore :$ regionid :$ accountid : instance /  acs : kvstore ::: instance /` |

- `$ regionid` describes a region. Replace it with a region ID or an asterisk ( * ).
- `$ accountid` describes an account. Replace it with an account ID or an asterisk ( * ).
- `$ instanceid` describes an instance. Replace it with an instance ID or an asterisk ( * ).

## Authorization rules

When RAM users request access to Redis resources, ApsaraDB for Redis checks for permissions from RAM to make sure the access is allowed by the resource owner. See the following authentication rules for each supported Redis API.

Table 1-1: RAM authorization rules for Redis APIs

| Action | Authorization rule |
| --- | --- |
| CreateDBInstance | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| DeleteInstance | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| ModifyInstanceSpec | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |

| Action | Authorization rule |
| --- | --- |
| RenewInstance | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| RenewMultiInstance | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| ModifyInstanceAttribute | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| FlushInstance | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| DescribeInstances | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| DescribeInstanceAttribute | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| ModifyInstanceMaintainTime | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| ModifySecurityIps | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| SwitchNetwork | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| ModifyInstanceNetExpireTime | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| CreateBackup | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| ModifyBackupPolicy | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| DescribeBackupPolicy | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| DescribeBackups | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| RestoreInstance | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| DescribeHistoryMonitorValues | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |

| Action | Authorization rule |
| --- | --- |
| DescribeInstanceConfig | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |
| ModifyInstanceConfig | `acs : kvstore :$ regionid :$ accountid : instance /$ instanceid` |

# 2 Request Structure

### Endpoint

The service access address of ApsaraDB for Redis APIs is `r-kvstore.aliyuncs.com`.

**Note:**

*example.com* is the project customized access domain address, connect to the Administrator for the domain address.

### Communication protocol

Request communication through HTTP or HTTPS is supported. We recommend that requests be sent through HTTPS for enhanced security.

### Request method

The system supports sending of HTTP GET requests. In this mode, the request parameters must be included in the request URL.

### Request parameters

You must specify the operation to be executed, namely, the Action parameter (for example, CreateInstance), for each request, and the public request parameters required for each operation and specific request parameters of the specified operation.

### Character encoding

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

# 3 Common Parameters

Public request parameters are request parameter that each interface uses.

## Public parameters

Table 3-1: Public request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| Format | String | Yes | Type of the returned value. Values: JSON and XML. Default value: XML. |
| Version | String | Yes | API version number: Format: YYYY-MM-DD (date). The current version number is 2016-11-01. |
| AccessKeyId | String | Yes. | Key ID that Alibaba Cloud issues to a user for service access. |
| Signature | String | Yes | Signature result string. For more information about the signature calculation method, see #unique_6. |
| SignatureMethod | String | Yes | Signature method. Currently, HMAC-SHA1 is supported. |
| Timestamp | String | Yes | Timestamp of a request. The date format follows the ISO8601 standard and uses UTC time. Format: `YYYY-MM-DDThh:mm:ssZ`, for example, 2013-08-15T12:00:00Z (20:00:00, August 15, 2013, Beijing time). |
| SignatureVersion | String | Yes | The version of the signature algorithm. The current version is 1.0. |
| SignatureNonce | String | Yes | Unique random number, used to prevent replay attacks. The user must use different random numbers for different requests. |

## Example

```
                https://r-kvstore.aliyuncs.com/
                Format=json
               &Version=2015-01-01
               &Signature=Pc5WB8gokVn0xfeu%2FZV%2BiNM1dgI%
3D
```

```
                & SignatureM  ethod = HMAC - SHA1
                & SignatureN  once = 1521552885  2396
                & SignatureV  ersion = 1 . 0
                & AccessKeyI  d = key - test
                & Timestamp = 2016 - 01 - 01T12 : 00 : 00Z
```

### Public return parameters

**Each time the user sends a call request to an interface, the system returns a unique identification code (RequestId) to the user, whether the request is successful or not.**

#### Example

```
<?  xml   version =" 1 . 0 "  encoding =" utf - 8 "? >
                <!— Result   Root   Node -->
                < Interface   Name + Response >
                <!— Return   Request   Tag -->
                < RequestId > 4C4fdsf38 - 3910 - 447D - 87AD -
 AC07893221  6 </ RequestId >
                <!— Return   Result   Data -->
                </ Interface   Name + Response >
```

# 4 Returns results

After APIs are called, data is returned in the unified format. A returned HTTP status code of `2xx` indicates that the call is successful. A returned HTTP status code of `4xx` or `5xx` indicates that the call fails. For successful calls, the primary formats of returned data are XML and JSON. When a request is sent, an external system can input parameters to specify the format of returned data. XML is the default format.

 Note:
In this document, examples of results returned are formatted in a way that is easier for you to read. The actual results returned are not formatted with line breaks, indentation, or other layouts.

## Successful results

XML return results include a message stating if the request is successful and the specific service data. An example is as follows:

```
<?  xml   version =" 1 . 0 "  encoding =" utf - 8 "? >
<!-- Result   root   node  -->
< API   name + Response >

< RequestId > 4C4fdsf38 - 3910 - 447D - 87AD - AC07893221  6 </
 RequestId >
<!--  Return   result   data -->
</ API   name + Response >
```

JSON example:

```
" RequestId ": " 4C4fdsf38 - 3910 - 447D - 87AD - AC07893221  6 ",
/*  Returns   result   data  */
```

## Incorrect results

If there is an interface call error, no result data is returned. The caller can locate the cause of the mistake according to the error code in the attached list. If an error is reported in an API call, no result data is returned. The caller can refer to the error code table in the appendix to locate the error cause. When an error occurs in a call, the HTTP request returns an HTTP status code of `4xx` or `5xx`. The returned message body contains the specific error code and error message. The message body also contains a globally unique RequestId and the HostId of the site you accessed with this request. If unable to locate the error cause, the caller can contact Alibaba Cloud

customer service and provide the HostId and RequestId to help solve the problem as quickly as possible.

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

JSON example:

```
" RequestId ": " 7463B73D - 35CC - 4D19 - A010 - 6B8D65D242  EF ",
" HostId ": "  r - kvstore . aliyuncs . com ",
" Code ": " Unsupporte  dOperation ",
" Message ": " The   specified   action   is   not   supported ."
```

# 5 Signature method

ApsaraDB for Redis performs authentication on the sender of each access request. Therefore, no matter whether HTTP or HTTPS is used to submit a request, the request must contain the signature information. ApsaraDB for Redis performs symmetric encryption using the AccessKey ID and AccessKey Secret to verify the identity of request senders.

The AccessKey ID and AccessKey Secret are officially issued to visitors by Alibaba Cloud (visitors can apply for and manage them on the Alibaba Cloud official website ). The Access Key ID indicates the identity of the visitor. The Access Key Secret is the secret key to encrypt the signature string and verify the signature string on the server . It must be kept strictly confidential and must be made only available to Alibaba Cloud and the authenticated visitor.

## Sign an access request

Follow these steps to sign an access request:

1. Use request parameters to construct a canonicalized query string.
   a. Sort all request parameters alphabetically by parameter names. (The request parameters include the “public request parameters” and the custom parameters for the given request APIs described in this document, but do not include the Signature parameter mentioned in the “public request parameters”.)

      Notice:

When a request is submitted using the GET method, these parameters constitute the parameter section of the request URI (that is, the section in the URI following "?" and connected by "&").

b. Encode the name and value of each request parameter.

Perform URL encoding on the names and values using the UTF-8 character set. The URL encoding rules are as follows:

- Do not encode uppercase letters A-Z, lowercase letters a-z, numbers 0-9, and characters including the hyphen (-), underscore (_), period (.), and tilde (~).
- Encode other characters in the format of `% XY`, with `XY` representing the ASCII code in hexadecimal notation of the characters. For example, encode the English double quotes ( ") as `% 22`.
- Encode extended UTF-8 characters in the format of `% XY % ZA ...`.
- Encode the space ( ) as `% 20` rather than the plus sign (+).

Notice:
Generally, libraries supporting the URL encoding (for example, java.net.URLEncoder in Java) are all encoded according to the rules for `applicatio n / x - www - form - urlencoded` of the MIME type. If this encoding method is used, replace the plus sign (+) in the encoded strings with `% 20`, the asterisk (*) with `% 2A`, and change `% 7E` back to the tilde (~) to generate the encoding strings specified by the preceding rules.

c. Connect the encoded parameter names and values with the equal sign (=).

d. Then, sort the parameter name and value pairs connected by equal signs in alphabetical order, and connect them with an ampersand (&) to produce the canonicalized query string.

2. Use the canonicalized query string obtained in the preceding step to construct the string for signature calculation according to the following rules:

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

```
  percentEnc  ode ( Canonicali  zedQuerySt  ring )
```

Where,

- `HTTPMethod` indicates the HTTP method used to submit a request, for example, GET.
- `percentEnc  ode ("/")` indicates the encoded value for the character "/ " according to the URL encoding rules described in Step 1.ii, namely `% 2F` .
- `percentEnc  ode ( Canonicali  zedQuerySt  ring )` indicates the encoded string of the canonicalized query string constructed in Step 1, produced by following the URL encoding rules described in Step 1.ii.

3. Based on the RFC2104 definition, use the preceding string used for the signature to calculate the signature HMAC value.

   **Notice:**
   When the signature is calculated, the key is the Access Key Secret you hold adding the & character (ASCII:38), and the SHA1 hashing algorithm is used.

4. According to the Base64 encoding rules, encode the preceding HMAC value into a string to obtain the signature value.
5. Add the obtained signature value to the request parameters as the Signature parameter. The request signing process is complete.

   **Notice:**
   When the obtained signature value is submitted to the ApsaraDB for Redis server as the final request parameter value, the URL encoding must be performed for the value in compliance with the RFC3986 rules, which is the same as that for other parameter values.

### Example

If DescribeDBInstances is used as an example, the request URL before signing is:

```
http :// r - kvstore . aliyuncs . com /? Timestamp = 2013 - 06 -
01T10 : 33 : 56Z & Format = XML & AccessKeyI  d = testid & Action =
DescribeIn  stances & SignatureM  ethod = HMAC - SHA1 & RegionId =
region1 & SignatureN  once = NwDAxvLU6t  FE0DVb & Version = 2015 - 01
- 01 & SignatureV  ersion = 1 . 0
```

The calculated string to be signed StringToSign is as follows:

```
GET &% 2F & AccessKeyI  d % 3Dtestid & Action % 3DDescribe  Instances
& Format % 3DXML & RegionId % 3Dregion1 & SignatureM  ethod % 3DHMAC
```

```
- SHA1 & SignatureN  once % 3DNwDAxvLU  6tFE0DVb & SignatureV  ersion
% 3D1 . 0 & Timestamp % 3D2013 - 06 - 01T10 % 253A33 % 253A56Z &
Version % 3D2015 - 01 - 01
```

**It is assumed that the Access Key ID is `testid`, the Access Key Secret is `testsecret`, and the Key used for HMAC calculation is `testsecret &`. The calculated signature value is `BIPOMlu8LX  BeZtLQkJTw  6iFvw1E =`.**

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

```
http :// r - kvstore . aliyuncs . com /? Timestamp = 2013 - 06 -
01T10 % 3A33 % 3A56Z & Format = XML & AccessKeyI  d = testid & Action
= DescribeIn  stances & SignatureM  ethod = HMAC - SHA1 & RegionId
= region1 & SignatureN  once = NwDAxvLU6t  FE0DVb & SignatureV
ersion = 1 . 0 & Version = 2015 - 01 - 01 & Signature = BIPOMlu8LX
BeZtLQkJTw  6iFvw1E % 3D
```

# 6 API overview

Instance lifecycle management APIs

| API | Description |
| --- | --- |
| CreateInstance | Creates an instance. |
| DeleteInstance | Releases an instance. |
| ModifyInstanceSpec | Modifies an instance. |
| TransformToPrePaid | |

Instance management APIs

| API | Description |
| --- | --- |
| ModifyInstanceAttribute | Modifies attributes of an instance. |
| FlushInstance | Clears data of an instance. |
| DescribeInstances | Queries basic information about an instance. |
| DescribeInstanceAttribute | Queries details of an instance. |
| DescribeSecurityIps | Queries the IP whitelists of an instance. |
| ModifyInstanceMaintainTime | Modifies the maintenance time of an instance. |
| ModifySecurityIps | Modifies the whitelist of an instance. |
| DescribeRegions | Queries the region where an instance can be sold. |
| SwitchNetwork | Modifies the network type. |
| ModifyInstanceNetExpireTime | Modifies the retention period of a classic network connection address. |

Backup recovery APIs

| API | Description |
| --- | --- |
| CreateBackup | Create a backup. |
| ModifyBackupPolicy | Modifies a backup policy. |
| DescribeBackupPolicy | Queries a backup policy. |
| DescribeBackups | Displays a backup list. |

| API | Description |
| --- | --- |
| RestoreInstance | Rolls an instance back based on a backup set. |

Monitoring management APIs

| API | Description |
| --- | --- |
| DescribeMonitorItems | Views a metric list. |
| DescribeHistoryMonitorValues | Views the historical monitoring data. |

Parameter management APIs

| API | Description |
| --- | --- |
| DescribeInstanceConfig | Views the parameter configuration of an instance. |
| ModifyInstanceConfig | Modifies the parameter configuration of an instance. |

# 7 Lifecycle management

## 7.1 CreateInstance

### Description

This API is used to create an instance. For more information about the instance types , see Instance type table.

### Request parameters

Table 7-1: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Public request parameters> | - | Yes | For more information, see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Operation API name. Value: CreateInstance. |
| InstanceName | String | No | Instance name. The name is a string of 2 to 128 characters and must start with a letter (uppercase or lowercase) or a Chinese character. Special characters , such as the at sign (@), slash (/), colon (:), equal sign (=), quotation mark ( “), angle brackets (<>), braces ({}), and square brackets ([]) and space, are not supported. |

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| Password | String | No | Instance password. The password is a string of 8 to 30 characters and must contain uppercase letters, lowercase letters, and numbers.<br>  Notice: These special characters are not supported now: exclamation mark (!), angle brackets (<>), parentheses (()), square brackets ([]), braces ({}), comma (,), backquote (`), tilde (~), period (.), hyphen (-), underscore (_), at sign (@), number sign (#), dollar sign ($), percent sign (%), caret (^), ampersand (&), and asterisk (*). |
| InstanceClass | String | Yes | Type of the applied ApsaraDB for Redis instance. For more information, see Instance type table. |
| RegionId | String | Yes | Region of the applied ApsaraDB for Redis instance. You can use the DescribeRegions function to view available data centers. |

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| ZoneId | String | No | Lower-level zone of the RegionId. You can use the DescribeRegions function to view available zones. |
| ChargeType | String | No | Billing method. Supported values : PrePaid and PostPaid. Default value: PostPaid. |
| Period | Long | No | Payment cycle . Required if ChargeType is set to PrePaid. Unit: month. Supported values: 1-9, 12, 24, and 36. |
| Token | String | No | This parameter is used to guarantee the idempotence of the request. This parameter value is generated by the client and must be unique. It cannot exceed 64 ASCII characters. For more information , see the section “ How to guarantee idempotence”. |
| NetworkType | String | No | Network type:<br>· Classic<br>· VPC<br>The default value is CLASSIC. |
| VpcId | String | No | VPC ID |

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| VSwitchId | String | No | VSwitch ID |
| PrivateIp | String | No | Private IP address |
| SrcDBInstanceId | String | No | If an instance created based on a backup set generated by another instance is valid, this parameter indicates the ID of the instance that generates the backup set. |
| BackupId | String | No | If an instance created based on a backup set generated by another instance is valid, this parameter indicates the ID of the generated backup set. Query the value of BackupId by calling DescribeBackups. |
| InstanceType | String | No | Instance type. Supported values: Redis and Memcache. Default value: Redis. |
| EngineVersion | String | No | Engine version. Supported values: 2.8 and 4.0. Default value: 2.8. |

### Response parameters

Table 7-2: Response parameters

| Name | Parameter type | Description |
| --- | --- | --- |
| <Public return parameters> | - | For more information, see #unique_12/unique_12_Connect_42_section_rjr_zg |
| InstanceId | String | Instance ID (globally unique). |
| InstanceName | String | Instance name |

**Note:**

In consideration of the historical compatibility, some returned fields (such as Config and Region) of the function are not mentioned in this document. Alibaba Cloud will delete these fields gradually in the future. In this case, do not rely on the returned fields not involved in this document when calling the APIs.

### Request example

```
 https :// r - kvstore . aliyuncs . com
< Common   request   parameters >
& Action = CreateInst  ance
& RegionId = cn - hangzhou
& Password = Qa123456
& InstanceCl  ass =  redis . master . small . default
```

### Response example

```
" InstanceId ":" 736538d0a6  894665 ",
" InstanceNa  me ":" 736538d0a6  894665 "
```

## 7.2 ModifyInstanceSpec

### Description

This API is used to change the instance type. For more information about the instance types, see Instance specifications.

### Request parameters

Table 7-3: Request Parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | Yes | See #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Operation API name. Value : ModifyInstanceSpec. |
| InstanceId | String | Yes | Instance ID ( globally unique) |
| InstanceClass | String | Yes | Type of the applied ApsaraDB for Redis instance. For more information, see Instance specifications. |

### Response parameters

Table 7-4: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common return parameters> | - | See #unique_12/unique_12_Connect_42_section_rjr_zg |
| Orderid | String | Order ID. |

### Request example

```
 https :// r - kvstore . aliyuncs . com
< Common   request   parameters >
& Action = ModifyInst  anceSpec
& InstanceId = 736538d0a6  894665
& InstanceCl  ass =  redis . master . mid . default
```

### Response example

```
" OrderId " : " 2012949002  60011 "
```

```
" RequestId " : " 283746AF - 82B3 - 4BFF - 88CC - BF34CDE273  2 "
```

## 7.3 DeleteInstance

### Description

Requirements for interface instance call & release are as follows:

- The current status of instance: running.
- Not artificially locked.

Notice:
A subscribed instance cannot be deleted. It is only released at expiration.

### Request parameters

Table 7-5: Request parameters

| Name | Type | Required or not | Description |
|---|---|---|---|
| <Public request parameters> | - | Yes | For more information, see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value: DeleteInstance. |
| InstanceId | String | Yes | Instance id ( globally unique) |

### Response parameters

Table 7-6: Response parameters

| Name | Type | Description |
|---|---|---|
| <Public return parameters > | - | For more information, see #unique_12/unique_12_Connect_42_section_rjr_zg |

### Request example

```
 https :// r - kvstore . aliyuncs . com
< Public   request   parameters >
& Action = DeleteInst  ance
```

```
& InstanceId = 657e361a07  4646d5
```

### Response example

```
" RequestId " : " C2225574 - 1D93 - 4F8A - B1D5 - 39FCBAA406  60 "
```

# 8 Manage instances

## 8.1 DescribeDBInstanceNetInfo

### Description

Query the classic network connection address of the instance.

### Request parameters

Table 8-1: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameter> | - | - | For more information, see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value : DescribeDB InstanceNetInfo. |
| InstanceId | String | Yes | Instance ID ( globally unique) |

### Response parameters

Table 8-2: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common return parameters> | - | For more information, see #unique_12/unique_12_Connect_42_section_rjr_zg |
| NetInfoItems | List | Composed of InstanceNetInfo parameters. |

| Name | Type | Description |
| --- | --- | --- |
| InstanceNetworkType | String | The network type of the instance.<br>· Private (VPC private network)<br>· Classic: Classic Network |

Table 8-3: InstanceNetInfo parameters

| Name | Type | Description |
| --- | --- | --- |
| ConnectionString | String | DNS connection string |
| IPAddress | String | IP address of the instance |
| IPType | String | IP type of the instance:<br>· Private (VPC private network)<br>· Inner (Reserved classic network IP address) |
| Port | String | Port information |
| VPCId | String | VPC ID |
| VSwitchId | String | VSwitch ID |
| ExpiredTime | String | Remaining time before expiration of the reserved classic network IP address . In seconds. |

## Examples

### Request example

```
 https :// r - kvstore . aliyuncs . com . com /
? < Common   request   parameters >
& Action =  DescribeDB  InstanceNe  tInfo
& InstanceId = 657e361a07  4646d5
```

### Response example

```
 {
       " RequestId ": " 47651832 - 5882 - 4E35 - BABF - 97D01E06EB
 12 ",
       " InstanceNe  tworkType ": " VPC ",
       " NetInfoIte  ms ": {
           " InstanceNe  tInfo ": [{
```

```
                " Connection  String ": " r - m5e6a11fb9  fd3414 .
 redis . rds . aliyuncs . com ",
                " Port ": " 6379 ",
                " DBInstance  NetType ": " Inner ",
                " VPCId ": "",
                " IPAddress ": " 10 . 146 . 182 . 164 ",
                " ExpiredTim  e ": " 2581948 "
            }, {
                " Connection  String ": " r - m5e6a11fb9  fd3414983 .
 redis . rds . aliyuncs . com ",
                " Port ": " 6379 ",
                " DBInstance  NetType ": " Private ",
                " VPCId ": " vpc - m5edrscsrb  mda2m46h4c  7 ",
                " IPAddress ": " 192 . 168 . 100 . 29 ",
            }]
        }
    }
}
```

## 8.2 DescribeInstanceAttribute

### Description

This API is used to query details of an instance.

### Request parameters

Table 8-4: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | Yes | For more information, see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value : DescribeInstanceAttribute. |
| InstanceId | String | Yes | Instance ID ( globally unique) |

### Response parameters

Table 8-5: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| Instances | List | Array composed of DBInstanceAttributes |

DBInstanceAttribute parameter structure

| Name | Type | Description |
| --- | --- | --- |
| InstanceId | String | Instance ID (globally unique) |
| InstanceName | String | Instance name |
| Capacity | Long | Capacity of the applied ApsaraDB for Redis instance. Unit: MB. |
| InstanceClass | String | Instance type |
| Bandwidth | Long | Instance bandwidth limit. Unit: Mbit/s. |
| Connections | Long | Instance connection quantity limit. Unit: count. |
| ConnectionDomain | String | Connection domain of the ApsaraDB for Redis instance (only Intranet access supported) |
| Port | Int | ApsaraDB for Redis connection port |
| RegionId | String | Region of the applied ApsaraDB for Redis instance. For more information, see #unique_18. |
| ZoneId | String | Lower-level zone ID of the RegionId. For more information, see #unique_18. |
| InstanceStatus | String | Instance status:<br>· Normal<br>· Creating<br>· Changing<br>· Inactive |
| ChargeType | String | Billing method. Supported values: PrePaid and PostPaid. |

| Name | Type | Description |
| --- | --- | --- |
| CreateTime | String | Instance creation time. The time format follows the ISO8601 notation, and the UTC time is used in the format of `YYYY - MM - DDThh : mm : ssZ`. |
| EndTime | String | Expiration time for a pre-paid instance. The time format follows the ISO8601 notation, and the UTC time is used in the format of `YYYY - MM - DDThh : mm : ssZ`. |
| NetworkType | String | Network type. Supported values: CLASSIC and VPC. |
| VpcId | String | VPC ID |
| VSwitchId | String | VSwitch ID |
| PrivateIpAddress | String | Private IP address |
| MaintainStartTime | String | Maintenance start time |
| MaintainEndTime | String | Maintenance end time |
| SecurityIPList | String | IP address whitelist |
| AvailabilityValue | String | Availability metrics of the current month |

**Notice:**

In consideration of the historical compatibility, some returned fields (such as Config and Region) of the function are not mentioned in this document. Alibaba Cloud will delete these fields gradually in the future. In this case, do not rely on the returned fields not involved in this document when calling the APIs.

Request example

```
 https :// r - kvstore . aliyuncs . com 、
? < Common   request   parameters >
& Action = DescribeIn  stanceAttr  ibute
```

```
& InstanceId = 736538d0a6  894665
```

Response example

```
{
{
    " Instances " : {
        "  DBInstance  Attribute  " : [{
                " Bandwidth " :  128 ,
                " Capacity " :  512 ,
                " Connection  Domain " : " de5d88e34d  004211 . m .
 cnhzalicm1  0pub001 . r - kvstore . aliyuncs . com . com ",
                " Connection  s " :  300 ,
                " ZoneId " : " cn - qingdao - b ",
                " InstanceId " : " de5d88e34d  004211 ",
                " InstanceNa  me " : " wl123456 ",
                " InstanceSt  atus " : " Available ",
                 " InstanceCl  ass " : " redis . master . mid .
 default ",
                " Port " :  11211 ,
                " QPS " :  4500 ,
                " RegionId " : " cn - qingdao ",
                 " ChargType ": " PostPaid ",
                  " NetworkTyp  e ":" ClASSSIC "
                " MaintainSt  artTime ": " 02 :  00Z ",
                 " MaintainEn  dTime ": " 06 :  00Z ",
                 " SecurityIP  List ": " 192 . 168 . 0 . 1 ",
                  " Availabili  tyValue ":" 100 %"
        }]
  }
" RequestId " : " 283746AF - 82B3 - 4BFF - 88CC - BF34CDE273  2 ”
}
```

## 8.3 DescribeInstances

### Description

This API is used to query one or multiple instances under an account.

### Request parameters

Table 8-6: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | - | For more information, see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | The API name. Value: DescribeInstances. |

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| InstanceIds | String | No | Instance ID ( globally unique). This parameter is required when an instance ID is specified. To query multiple instance IDs, separate the IDs by comma (,). If the parameter value is left blank, all instances under the account are queried by default. |
| InstanceStatus | String | No | Filter instances to be returned by the instance status:<br>· Normal<br>· Creating<br>· Changing<br>· Inactive |
| ChargeType | String | No | Filter instances to be returned by the payment options:<br>· PrePaid<br>· PostPaid |
| RegionId | String | Yes | Call DescribeRegions to query the RegionId. |
| InstanceType | String | No | Filter instances by the engine type:<br>· Memcache<br>· Redis |
| PageNumber | Integer | No | Page number of the instance status list . Initial value: 1. Default value: 1. |

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| PageSize | Integer | No | Number of lines per page in paging query. Maximum value: 50. Default value: 10. |
| NetworkType | String | No | Filter instances by network type:<br>· CLASSIC<br>· VPC |

Response parameters

Table 8-7: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common response parameters> | - | For more information, see #unique_12/unique_12_Connect_42_section_rjr_zg |
| Instances | List | Array composed of Instances |
| TotalCount | Integer | Total number of instances |
| PageNumber | Integer | Page number of the instance list |
| PageSize | Integer | Number of lines per page set during input |

Instance parameter structure

| Name | Type | Description |
| --- | --- | --- |
| InstanceId | String | Instance ID (globally unique) |
| InstanceName | String | Instance name |
| Capacity | Long | Capacity of the applied ApsaraDB for Redis instance. Unit: MB. |
| InstanceClass | String | Instance type |

| Name | Type | Description |
| --- | --- | --- |
| Bandwidth | Long | Instance bandwidth limit. Unit: Mbit/s. |
| Connections | Long | Instance connection quantity limit. Unit: count. |
| ConnectionDomain | String | Instance connection domain (only Intranet access supported). |
| Port | Int | Connection port |
| Username | String | Connection user name |
| RegionId | String | Region of the applied ApsaraDB for Redis instance |
| ZoneId | String | Lower-level zone ID of the RegionId |
| InstanceStatus | String | Instance status:<br>· Normal<br>· Creating<br>· Changing<br>· Inactive<br>· Transforming<br>· BackupRecovering<br>· MinorVersionUpgrading |
| ChargeType | String | Billing method. Supported values: PrePaid and PostPaid. |
| CreateTime | String | Instance creation time. The time format follows the ISO8601 notation, and the UTC time is used in the format of `YYYY - MM - DDThh : mm : ssZ`. |

| Name | Type | Description |
| --- | --- | --- |
| EndTime | String | Expiration time for a pre-paid instance. The time format follows the ISO8601 notation, and the UTC time is used in the format of `YYYY - MM - DDThh : mm : ssZ` 。 |
| NetworkType | String | Network type. Supported values: CLASSIC and VPC. |
| VpcId | String | VPC ID |
| VSwitchId | String | VSwitch ID |
| Privateipaddr | String | Private IP address |

**Notice:**

In consideration of the historical compatibility, some returned fields (such as Config) of the function are not mentioned in this document. Alibaba Cloud will delete these fields gradually in the future. In this case, do not rely on the returned fields not involved in this document when calling the APIs.

### Request example

```
 https :// r - kvstore . aliyuncs . com . com /
< Common   request   parameters >
& Action = DescribeIn  stances
& PageNumber = 1
& PageSize = 10
& InstanceId = de5d88e34d  004211
```

### Response example

```
    " Instances " : {
        " Instance " : [{
                " Bandwidth " :  128 ,
                " Capacity " :  512 ,
                " Connection  Domain " : " de5d88e34d  004211 . m .
cnhzalicm1  0pub001 . r - kvstore . aliyuncs . com . com ",
                " Connection  s " :  300 ,
                " ZoneId " : " cn - qingdao - b ",
                " InstanceId " : " de5d88e34d  004211 ",
                " Instancena  me ": " wl123456  ",
                " InstanceSt  atus " : " Available ",
                 " InstanceCl  ass " : " redis . master . mid .
default ",
                " Port " :  11211 ,
                " RegionId " : " cn - qingdao ",
                " UserName " : " de5d88e34d  004211 "
```

```
                “ NetworkTyp  e ”:” CLASSSIC ”
“ ChargeType ”:”  PostPaid ”



    " PageNumber " :  1 ,
    " PageSize " :  10 ,
    " TotalCount " :  1 ,
    " RequestId " : " 969D0A1D - C91A - 4837 - 9F70 - 49785DF9BD  CE "
```

## 8.4 FlushInstance

### Description

This API is used to irrecoverably clear data stored in a instance.

Operations of this API are asynchronous. After you call this API, the result is immediately returned, and data of the instance is cleared in the back-end.

### Request parameters

Table 8-8: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | - | See #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value: FlushInstance. |
| InstanceId | String | Yes | Instance ID ( globally unique) |

### Response parameters

Table 8-9: Response Parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common return parameters> | - | See #unique_12/unique_12_Connect_42_section_rjr_zg |

### Request example

```
 https :// r - kvstore . aliyuncs . com
< Common   request   parameters >
& Action =  FlushInsta  nce
```

```
& InstanceId = 657e361a07  4646d5
```

Response example

```
" RequestId " : " 96893674 - E50C - 495D - AB0E - 2F12C1E0FD  45 "
```

## 8.5 ModifyInstanceAttribute

Description

This API is used to modify the attributes of an instance, including the name or password.

Request parameters

Table 8-10: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | - | For more information, see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | The API name. Value: ModifyInstanceAttribute. |
| InstanceId | String | Yes | Instance id, globally unique. |

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| InstanceName | String | No | Modified instance name. The name is a string of 2 to 128 characters and must start with a letter (uppercase or lowercase) or a Chinese character. Special characters, such as the at sign (@), slash (/), colon (:), equal sign (=), quotation mark ( “), angle brackets (<>), braces ({}), and square brackets ([]) and space, are not supported. |

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| NewPassword | String | No | Instance password. The password is a string of 8 to 30 characters and must contain uppercase letters, lowercase letters, and numbers.<br>Notice: The following special characters are not supported now: The following special characters are not supported now: Exclamation mark (!), angle brackets (<>), parentheses (()), square brackets ([]), braces ({}), comma (,), backquote (`), tilde (~), period (.), hyphen (-), underscore (_), at sign (@), number sign (#), dollar sign ($), percent sign (%), caret (^), ampersand (&), and asterisk (*). |

Response parameters

Table 8-11: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common response parameters> | - | For more information, see #unique_12/unique_12_Connect_42_section_rjr_zg |

### Request example

```
 https :// r - kvstore . aliyuncs . com
< Common   request   parameters >
& Action =  ModifyInst  anceAttrib  ute
& InstanceId = 657e361a07  4646d5
& NewPasswor  d = Qa12345678
& InstanceNa  me = TestInstan  ce
```

### Response example

```
" RequestId " : " E3B35BEA - 9EB0 - 402C - 88CF - C46CCCC1EE  59 "
```

## 8.6 ModifyInstanceMaintainTime

### Description

This API is used to modify the maintenance time. Alibaba Cloud may perform routine maintenance for instances at the specified maintenance time.

### Request parameters

Table 8-12: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | Yes | See #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value : ModifyInstanceMaintainTime. |
| InstanceId | String | Yes | Instance ID ( globally unique) |
| MaintainStartTime | String | Yes | Maintenance start time |
| MaintainEndTime | String | Yes | Maintenance end time |

### Response parameters

Table 8-13: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common return parameters> | - | See #unique_12/unique_12_Connect_42_section_rjr_zg |

### Request example

```
 https :// r - kvstore . aliyuncs . com
< Common   request   parameters >
& Action = ModifyInst  anceMainta  inTime
& InstanceId = 657e361a07  4646d5
&  MaintainSt  artTime = 02 : 00Z
&  MaintainEn  dTime = 06 : 00Z
```

### Response example

```
" RequestId " : " A099747A - 0826 - 499D - 9422 - 381C07337F  73 "
```

## 8.7 ModifyInstanceNetExpireTime

### Description

If an instance has been switched from a classic network to a VPC and the classic network connection address is retained, this API can be called to prolong the retention period of the classic network connection address.

### Request parameters

Table 8-14: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | Yes | For more information, see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value : ModifyInstanceNetExpireTime . |

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| InstanceId | String | Yes | Instance ID ( globally unique) |
| ConnectionString | String | Yes | Domain name used to access the classic network |
| ClassicExpiredDays | String | Yes | Retention period. Supported values: 14, 30, 60, and 120. |

### Response parameters

Table 8-15: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common response parameters> | - | For more information, see #unique_12/ unique_12_Connect_42_section_rjr_zg |

### Request example

```
 https :// r - kvstore . aliyuncs . com
< Common   request   parameters >
& Action =  ModifyInst  anceNetExp  ireTime
& ConectionS  tring =  fdafas3232  3ed . redis . rds . aliyuncs . com
& InstanceId = fdafas3232  3ed
&  ClassicExp  iredDays = 120
```

### Response example

```
" RequestId " : " AAAF99B1 - 69ED - 4E80 - 8CD5 - 272C09E46A  CF "
```

## 8.8 SwitchNetwork

### Description

This API is used to switch the network type of an instance. An instance can be switched from a classic network to a VPC.

### Request parameters

Table 8-16: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | Yes | For more information, see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value: SwitchNetwork. |
| InstanceId | String | Yes | Instance ID ( globally unique) |
| TargetNetworkType | String | Yes | Network type to be switched to.<br>· VPC<br>· Classic<br>Currently, an instance can be switched only from a classic network to a VPC. In this case , this parameter must be set to VPC. |
| VpcId | String | No | Virtual network ID of the switched VPC |
| VSwitchId | String | No | VSwitch ID of the switched VPC. This parameter must be specified if VpcId is specified. |

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| RetainClassic | String | No | Whether the classic network IP address is retained. Default value: False.<br>· True: retained<br>· False: not retainedFalse: do not retain |
| ClassicExpiredDays | String | No | Period to retain the classic network IP address. Unit: day.<br>Optional values : 14, 30, 60, 120. This parameter must be specified if RetainClassic is set to True. |

### Response parameters

Table 8-17: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common return parameters> | - | For more information, see #unique_12/unique_12_Connect_42_section_rjr_zg |

### Request example

```
 https :// r - kvstore . aliyuncs . com
< Common   request   parameters >
& Action =  SwitchNetw  ork
& InstanceId = fdafas3232  3ed
&  TargetNetw  orkType = VPC
& VpcId = fadsfa
& VSwitchId = 131ed
& RetainClas  sic = True
& ClassicExp  iredDays = 30
```

### Response example

```
" Requestid ": " maid "
```

# 9 Backup and recovery

## 9.1 ModifyBackupPolicy

### Description

This API is used to query a backup policy.

### Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | Yes | For more information, see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value : ModifyBackupPolicy. |
| InstanceId | String | Yes | Instance ID |
| PreferredBackupTime | String | Yes | Backup time, in the format of `HH:mmZ-HH:mmZ` |
| PreferredBackupPeriod | String | Yes | Backup cycle:<br>· Monday<br>· Tuesday<br>· Wednesday<br>· Thursday<br>· Friday<br>· Saturday<br>· Sunday |

### Response parameters

Table 9-1: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common return parameters> | - | For more information, see #unique_12/ unique_12_Connect_42_section_rjr_zg |

### Request example

```
 https :// r - kvstore . aliyuncs . com 、
< Common   request   parameters >
& Action =  ModifyBack  upPolicy
& InstanceId =  de5d88e34d  004211
& PreferredB  ackupTime = 00 : 00Z - 04 : 00Z
& PreferredB  ackupPerio  d =  Saturday
```

### Response example

```
" RequestId " : " 5C97648D - C85F - 4D58 - A71F - 7B6750856B  F7 ”
```

## 9.2 DescribeBackupPolicy

### Description

This API is used to query a backup policy you set. You can query the backup cycle, backup time, and other details of an instance.

### Request parameters

Table 9-2: Request Parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameter> | - | Yes | See #unique_12/ unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value : DescribeBa ckupPolicy. |
| InstanceId | String | Yes | Instance ID |

### Response parameters

Table 9-3: Response Parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common return parameter> | - | See #unique_12/ unique_12_Connect_42_section_rjr_zg |
| BackupRetentionPeriod | String | Backup retention period |
| PreferredBackupTime | String | Backup time, in the format of HH:mmZ- HH:mm Z |
| PreferredBackupPeriod | String | Backup cycle:<br>· Monday<br>· Tuesday<br>· Wednesday<br>· Thursday<br>· Friday<br>· Saturday<br>· Sunday |
| PreferredNextBackupTime | String | Next backup time |

### Example

```
 Https :// r - kvstore . aliyuncs . com
< Common   request   parameter >
& Action =  DescribeBa  ckupPolicy
& InstanceId =  de5d88e34d  004211
```

### Response example

```
" BackupRete  ntionPerio  d ":" 7 "
" PreferredB  ackupTime ":" 06 : 00Z - 07 : 00Z "
" PreferredN  extBackupT  ime ":" 2017 - 10 - 19T06 : 16Z "
" PreferredB  ackupPerio  d ":" Monday , Tuesday , Wednesday ,
 Thursday , Friday , Saturday , Sunday "
" RequestId " : " 5C97648D - C85F - 4D58 - A71F - 7B6750856B  F7 ”
```

## 9.3 DescribeBackups

### Description

This API is used to query the details of a backup file, including the backup start time, file size, backup mode, download address, and other information.

### Request parameters

Table 9-4: Request Parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | Yes | see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value: DescribeBackups. |
| InstanceId | String | Yes | Instance ID |
| BackupId | String | No | Backup set ID |
| PagSize | String | Yes | Number of records per page. Supported values: 30, 50, and 100. |
| PageNumber | String | Yes | Page number. It must be greater than 0 and cannot exceed the maximum value of the given Integer. |
| StrarTime | String | Yes | Query start time |
| EndTime | String | Yes | Query end time |

### Response parameters

Table 9-5: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common return parameter> | - | See #unique_12/unique_12_Connect_42_section_rjr_zg |
| Backups | List | An array composed of Backups |
| PageNumber | Integer | Page number |
| TotalCount | Integer | Total number of backups |
| PageSize | Integer | Number of records per page |

### Backup parameter structure

Table 9-6: Backup parameter structure

| Name | Type | Description |
| --- | --- | --- |
| BackupId | String | Backup set ID |
| BackupDBNames | String | Backup database name |
| BackupStatus | String | Backup set status:<br>· Success<br>· Failed |
| BackupStartTime | String | Backup start time |
| BackupEndTime | String | Backup end time |
| BackupType | String | Backup Type:<br>· Fullbackup<br>· IncrementalBackup |
| BackupMode | String | Backup mode:<br>· Automated<br>· Manual |
| BackupMethod | String | Backup method:<br>· Logical<br>· Physical |
| BackupDownloadURL | String | Download address of the backup file |
| BackupSize | String | Backup size |

### Example

```
 Https :// r - kvstore . aliyuncs . com
?< Common   request   parameter >
& Action =  DescribeBa  ckups
& InstanceId =  de5d88e34d  004211
&  Pagenumber  =  1
&  Pagesize  =  10
& InstanceId = de5d88e34d  004211
```

### Response example

```
    "  Backups  " : {
        "  Backup  " : [{
```

```
           “ BackupId ":" 187709043 ",
           " BackupDBNa  mes ":" all ",
          " BackupStat  us ":" Success ",
          Backuptype :  fullbackup  ",
" BackupStar  tTime ":" 2017 - 10 - 18T10 : 34 : 52Z ",
" BackupEndT  ime ":" 2017 - 10 - 18T10 : 36 : 06Z ",
" BackupMode ":" Manual ",
" BackupMeth  od ":" Physical ",
" BackupDown  loadURL ":" https :// rdsbak - st - v2 . oss - cn
 - shenzhen . aliyuncs . com / custins458  8367 / hins340258
 1_data_201  7101818340  8 . rdb ? OSSAccessK  eyId = AAAAAAAAAA
 AAAAAA & Expires = 1508409386 & Signature = rYyFYVdMOh  hTJ0TAPafG
 c6oJSuk % 3D ",
" BackupSize ":" 1024 "



    " PageNumber " :  1 ,
    " PageSize " :  10 ,
    " TotalCount " :  1 ,
" RequestId " : " 5C97648D - C85F - 4D58 - A71F - 7B6750856B  F7 ”
```

## 9.4 RestoreInstance

### Description

This API is used to recover data to the master instance based on a backup set.

**Notice:**
This operation may have a high risk because the backup data will cover the instance data.

### Request parameters

Table 9-7: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | Yes | For more information, see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value: RestoreInstance. |
| InstanceId | String | Yes | Instance ID |
| BackupId | String | Yes | Backup result set ID |

### Response parameters

Table 9-8: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common return parameters> | - | For more information, see #unique_12/ unique_12_Connect_42_section_rjr_zg |

### Request example

```
 https :// r - kvstore . aliyuncs . com
< Common   request   parameters >
& Action =  RestoreIns  tance
& InstanceId =  de5d88e34d  004211
& BackupId = fdafasf111
```

### Response example

```
" RequestId " : " AFA391BF - 808F - 4DA6 - 80A2 - A382108A09  45 "
```

# 10 Monitoring Management

## 10.1 DescribeMonitorItems

### Description

This API is used to query the list of available monitoring parameters. The results are returned in the format of <parameter:unit>.

### Request parameters

Table 10-1: Request parameters

| Name | Type | Required or not | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | Yes | For more information, see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value : DescribeMonitorItems. |

### Response parameters

Table 10-2: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common return parameters> | - | For more information, see #unique_12/unique_12_Connect_42_section_rjr_zg |
| MonitorItems | List | List of each monitoring parameter that can be viewed. |

### Request example

```
 https :// r - kvstore . aliyuncs . com
< Common   request   parameters >
```

```
& Action = DescribeMo  nitorItems
```

Response example

```
" MonitorIte  ms " : {
    " MonitorIte  m " : [{
            " MonitorKey " : " GetQ ",
            " Unit " : " Counts / s "

            " MonitorKey " : " Flush ",
            " Unit " : " Counts / s "

            " MonitorKey " : " UsedMemCac  he ",
            " Unit " : " Bytes "

            " MonitorKey " : " ReplaceQ ",
            " Unit " : " Counts / s "


" RequestId " : " B906A893 - 58A3 - 4644 - AC2D - A2C9B08706  C1 "
```

## 10.2 DescribeHistoryMonitorValues

### Description

This API is used to view the historical monitoring data of an instance.

### Request parameters

Table 10-3: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | Yes | For more information, see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value : DescribeHistoryMonitorValues . |
| InstanceId | String | Yes | Instance ID |

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| StartTime | String | Yes | Start time of the historical monitoring data. The time format follows the ISO8601 notation, , and the UTC time is used in the format of `YYYY-MM-DDThh:mm:ssZ`. |
| EndTime | String | Yes | End time of the historical monitoring data. The time format follows the ISO8601 notation, and the UTC time is used in the format of `YYYY-MM-DDThh:mm:ssZ`. The value of EndTime must be greater than or equal to that of StartTime. |
| IntervalForHistor | String | Yes | The interval between historical monitoring data. Unit: m (minutes). Value: 01m, 05m, 15m, or 60m. |
| MonitorKeys | String | No | Metric key. The value of this parameter is queried using the DescribeMonitorItems function. |

### Response parameters

Table 10-4: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common return parameters> | - | For more information, see #unique_12/ unique_12_Connect_42_section_rjr_zg |
| MonitorHistory | String | Monitoring information returned in JSON format. For more information about returned metrics, see View a metric list.<br>Notice:<br>To improve the data transmission efficiency, only metrics whose values are not 0 are returned. Metrics not displayed are all set to the default value 0. |

### Request example

```
 https :// r - kvstore . aliyuncs . com 、
< Public   request   parameters >
& Action =  DescribeHi  storyMonit  orValues
& InstanceId =  de5d88e34d  004211
& EndTime = 2014 - 11 - 27T12 % 3A02 % 3A00Z
& StartTime = 2014 - 11 - 27T12 % 3A00 % 3A00Z
& IntervalFo  rHistory = 01m
```

### Response example

```
" MonitorHis  tory " :
"{" 2014 - 11 - 27T12 : 00 : 00Z ":{" IsConnectC  ontrol ": false
 ," IsFlowCont  rol ": false ," ItemCount ": 1 ," QuotaConne  ction
 ": 500 ," QuotaFlow ": 15360 ," QuotaMemCa  che ": 1073741824 ,"
 QuotaQps ": 9000 ," UsedMemCac  he ": 14 },
" 2014 - 11 - 27T12 : 01 : 00Z ":{" IsConnectC  ontrol ": false ,"
 IsFlowCont  rol ": false ," ItemCount ": 1 ," QuotaConne  ction
 ": 500 ," QuotaFlow ": 15360 ," QuotaMemCa  che ": 1073741824 ,"
 QuotaQps ": 9000 ," UsedMemCac  he ": 14 },
" 2014 - 11 - 27T12 : 02 : 00Z ":{" IsConnectC  ontrol ": false ,"
 IsFlowCont  rol ": false ," ItemCount ": 1 ," QuotaConne  ction
```

```
 ": 500 ," QuotaFlow ": 15360 ," QuotaMemCa  che ": 1073741824 ,"
 QuotaQps ": 9000 ," UsedMemCac  he ": 14 }

" RequestId " : " 5C97648D - C85F - 4D58 - A71F - 7B6750856B  F7 "
```

# 11 Network security

## 11.1 ModifySecurityIps

### Description

Set the instance's IP whiteable list, and you can select the allowed ECs IP Access instance.

### Request parameters

Table 11-1: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | Yes | For more information, see #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value: ModifySecurityIps. |
| InstanceId | String | Yes | Instance ID ( globally unique) |
| SecurityIps | String | Yes | IP address whitelist to be modified |
| SecurityIp GroupName | String | Yes | Whitelist group |

### Response parameters

Table 11-2: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common return parameters> | - | For more information, see #unique_12/unique_12_Connect_42_section_rjr_zg |

### Request example

```
https :// r - kvstore . aliyuncs . com
```

```
< Common   request   parameters >
& Action =  ModifySecu  rityIps
& InstanceId = 657e361a07  4646d5
& SecurityIp  s = 1 . 1 . 1 . 1 ,  2 . 2 . 2 . 2
& SecurityIp  GroupName = testgroup
```

Response example

```
" RequestId " : " AAAF99B1 - 69ED - 4E80 - 8CD5 - 272C09E46A  CF "
```

## 11.2 ModifyInstanceVpcAuthMode

You can call this operation to enable or disable password-free access for an ApsaraDB for Redis instance. When the password-free access feature is enabled, Elastic Compute Service (ECS) instances in the same Virtual Private Cloud (VPC) can access the ApsaraDB for Redis instance without the password. You can also use the username and password to access the ApsaraDB for Redis instance.

For more information about how to perform the corresponding operation in the console, see #unique_37.

### Debugging

Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

### Request parameters

| Parameter | Type | Required | Example | Description |
| --- | --- | --- | --- | --- |
| Action | String | Yes | ModifyInstanceVpcAuthMode | The operation that you want to perform. Set this parameter to ModifyInstanceVpcAuthMode. |
| InstanceId | String | Yes | r-bp1xxxxxxxxxxxxx | The ID of the instance for which you want to enable or disable password-free access. |

| Parameter | Type | Required | Example | Description |
| --- | --- | --- | --- | --- |
| VpcAuthMode | String | Yes | Close | Specifies whether to enable password authentication for access within the VPC. Valid values:<br>· Open: enables password authentication.<br>· Close: disables password authentication.<br>Note:<br>Default value: Open. |
| AccessKeyId | String | No | Lxxxxxxxxxxxxxxw | The AccessKey ID that Alibaba Cloud provides for you to access services. |

## Response parameters

| Parameter | Type | Example | Description |
| --- | --- | --- | --- |
| RequestId | String | ABAF95F6-35C1-4177-AF3A-70969EBDF623 | The ID of the request. |

## Examples

### Sample request

```
 https :// r - kvstore . aliyuncs . com /
?  Action = ModifyInst  anceVpcAut  hMode
& InstanceId = r - bp1xxxxxxx  xxxxxx
& VpcAuthMod  e = Close
&< Common   request   parameters >
```

### Sample success response

`XML` format

```
< ModifyInst  anceVpcAut  hModeRespo  nse >
  < RequestId > ABAF95F6 - 35C1 - 4177 - AF3A - 70969EBDF6  23 </
 RequestId >
```

```
</ ModifyInst  anceVpcAut  hModeRespo  nse >
```

`JSON` format

```
{
 " RequestId ":" ABAF95F6 - 35C1 - 4177 - AF3A - 70969EBDF6  23 "
}
```

## Error codes

View error codes.

# 12 Parameter Management

## 12.1 ModifyInstanceConfig

### Description

This API is used to change the configuration parameters of an instance.

### Request parameters

Table 12-1: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Public request parameter> | - | Yes | See #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value : ModifyInstanceConfig. |
| InstanceId | String | Yes | Instance ID |
| Config | String | Yes | Instance configuration parameter (JSON String). For more information, see #unique_40. |

### Response parameters

Table 12-2: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Public return parameter> | - | See also. |

### Request example

```
 https :// r - kvstore . aliyuncs . com
< Common   request   parameters >
& Action =  ModifyInst  anceConfig
& InstanceId =  de5d88e34d  004211
```

```
& Config ={" hash - max - ziplist - entries ":" 512 "}
```

Response example

```
" RequestId ":" 59A58517 - F8FF - 44E5 - B90F - F386DB3E4A  B8 "
```

## 12.2 DescribeInstanceConfig

Description

This API is used to view the configuration parameters of an instance.

Request parameters

Table 12-3: Request parameters

| Name | Type | Required | Description |
| --- | --- | --- | --- |
| <Common request parameters> | - | Yes | See #unique_12/unique_12_Connect_42_section |
| Action | String | Yes | Required parameter. Value : DescribeInstanceConfig. |
| InstanceId | String | Yes | Instance ID |

Response parameters

Table 12-4: Response parameters

| Name | Type | Description |
| --- | --- | --- |
| <Common return parameters> | - | See #unique_12/unique_12_Connect_42_section_rjr_zg |
| Config | String | Configuration parameters for the instance. See #unique_40. |

Request example

```
 https :// r - kvstore . aliyuncs . com
< Common   request   parameters >
& Action =  DescribeIn  stanceConf  ig
```

```
& InstanceId =  de5d88e34d  004211
```

### Response example

```
" Config ":"{" EvictionPo  licy ":" volatile - lru "," hash - max -
 ziplist - entries ": 512 ,
" hash - max - ziplist - value ": 64 ," list - max - ziplist - entries
 ": 512 ,
" list - max - ziplist - value ": 64 ," set - max - intset - entries
 ": 512 ,
" zset - max - ziplist - entries ": 128 ," zset - max - ziplist -
 value ": 64 },
" RequestId ":" 59A58517 - F8FF - 44E5 - B90F - F386DB3E4A  B8 "
```

# 13 Appendix

## 13.1 Instance types

This topic describes the types and parameters of all ApsaraDB for Redis editions and the method of testing queries per second (QPS). To call the APIs related to a type of instance, use the `InstanceClass` parameter for the corresponding type described in this topic.

> **Note:**
> The maximum internal network bandwidth in below tables includes the maximum upstream bandwidth and the maximum downstream bandwidth. If network resources are sufficient, the bandwidth is unlimited for ApsaraDB for Redis instances. However, if network resources are insufficient, the maximum bandwidth takes effect for the instances.

### Standard dual-replica edition

> **Note:**
> A 256 MB master-replica instance uses the subscription billing method only.

| Type | InstanceClass (used in API operations) | Maximun concorrei connectic s | Maximun internal network bandwidt (MB) | CPU processin capacity | QPS reference value | Description |
|---|---|---|---|---|---|---|
| 256 MB master-replica | redis.master.micro.default | 10,000 | 10 | Single-core | 80,000 | Master-replica instance |
| 1 GB master-replica | redis.master.small.default | 10,000 | 10 | Single-core | 80,000 | Master-replica instance |

| Type | InstanceClass (used in API operations) | Maximun concorrei connectic s | Maximun internal network bandwidt (MB) | CPU processin capacity | QPS reference value | Description |
|---|---|---|---|---|---|---|
| 2 GB master-replica | redis.master.mid.default | 10,000 | 16 | Single-core | 80,000 | Master-replica instance |
| 4 GB master-replica | redis.master.stand.default | 10,000 | 24 | Single-core | 80,000 | Master-replica instance |
| 8 GB master-replica | redis.master.large.default | 10,000 | 24 | Single-core | 80,000 | Master-replica instance |
| 16 GB master-replica | redis.master.2xlarge.default | 10,000 | 32 | Single-core | 80,000 | Master-replica instance |
| 32 GB master-replica | redis.master.4xlarge.default | 10,000 | 32 | Single-core | 80,000 | Master-replica instance |
| 64 GB master-replica | redis.master.8xlarge.default | 10,000 | 48 | Single-core | 80,000 | Master-replica instance |

Standard zone-disaster recovery edition

Note:

To create a zone-disaster recovery instance, you have to select the region and zone that support zone-disaster recovery, such as China (Hangzhou) and Hangzhou Zones B and F.

| Type | InstanceClass (used in API operations) | Maximum concorrent connections | Maximu internal network bandwi (MB) | CPU process capacity | QPS referenc value | Description |
|---|---|---|---|---|---|---|
| Zone-disaster recovery 1 GB | redis.logic.sharding.drredissdb1g. 1db. 0rodb. 4proxy. default | 40,000 | 10 | Single-core | 80,000 | Master-replica zone-disaster recovery instance |
| Zone-disaster recovery 2 GB | redis.logic.sharding.drredissdb2g. 1db. 0rodb. 4proxy. default | 40,000 | 16 | Single-core | 80,000 | Master-replica zone-disaster recovery instance |
| Zone-disaster recovery 4 GB | redis.logic.sharding.drredissdb4g. 1db. 0rodb. 4proxy. default | 40,000 | 24 | Single-core | 80,000 | Master-replica zone-disaster recovery instance |
| Zone-disaster recovery 8 GB | redis.logic.sharding.drredissdb8g. 1db. 0rodb. 4proxy. default | 40,000 | 24 | Single-core | 80,000 | Master-replica zone-disaster recovery instance |

| Type | InstanceClass (used in API operations) | Maximum concorrent connections | Maximu internal network bandwi (MB) | CPU process capacity | QPS referenc value | Description |
|---|---|---|---|---|---|---|
| Zone-disaster recovery 16 GB | redis.logic.sharding.drredissdb16g.1db.0rodb.4proxy.default | 40,000 | 32 | Single-core | 80,000 | Master-replica zone-disaster recovery instance |
| Zone-disaster recovery 32 GB | redis.logic.sharding.drredissdb32g.1db.0rodb.4proxy.default | 40,000 | 32 | Single-core | 80,000 | Master-replica zone-disaster recovery instance |
| Zone-disaster recovery 64 GB | redis.logic.sharding.drredissdb64g.1db.0rodb.4proxy.default | 40,000 | 48 | Single-core | 80,000 | Master-replica zone-disaster recovery instance |

Zone-disaster recovery cluster edition

**Note:**

To create a zone-disaster recovery instance, you have to select the region and zone that support zone-disaster recovery, such as China (Hangzhou) and Hangzhou Zones B and F.

| Type | InstanceClass (used in API operations) | Number of nodes | Maximum concurrent connections | Maximum internal network bandwidth (MB) | CPU processing capacity | QPS reference value | Description |
|---|---|---|---|---|---|---|---|
| Zone-disaster recovery 16 GB cluster | redis.logic.sharding.drredismdb16g.8db.0rodb.8proxy.default | 8 | 80,000 | 768 | 8-core | 800,000 | Zone-disaster recovery cluster instance |
| Zone-disaster recovery 32 GB cluster | redis.logic.sharding.drredismdb32g.8db.0rodb.8proxy.default | 8 | 80,000 | 768 | 8-core | 800,000 | Zone-disaster recovery cluster instance |
| Zone-disaster recovery 64 GB cluster | redis.logic.sharding.drredismdb64g.8db.0rodb.8proxy.default | 8 | 80,000 | 768 | 8-core | 800,000 | Zone-disaster recovery cluster instance |
| Zone-disaster recovery 128 GB cluster | redis.logic.sharding.drredismdb128g.16db.0rodb.16proxy.default | 16 | 160,000 | 1,536 | 16-core | 1,600,000 | Zone-disaster recovery cluster instance |

| Type | InstanceClass (used in API operations) | Number of nodes | Maximum concurrent connections | Maximum internal network bandwidth (MB) | CPU process capacity | QPS reference value | Description |
|---|---|---|---|---|---|---|---|
| Zone-disaster recovery 256 GB cluster | redis.logic.sharding.drredismdb256g.16db.0rodb.16proxy.default | 16 | 160,000 | 1,536 | 16-core | 1,600,000 | Zone-disaster recovery cluster instance |
| Zone-disaster recovery 512 GB cluster | redis.logic.sharding.drredismdb512g.32db.0rodb.32proxy.default | 32 | 320,000 | 3,072 | 32-core | 3,200,000 | Zone-disaster recovery cluster instance |
| Zone-disaster recovery 1 TB cluster | redis.logic.sharding.drredismdb1024g.64db.0rodb.64proxy.default | 64 | 640,000 | 6,144 | 64-core | 6,400,000 | Zone-disaster recovery cluster instance |
| Zone-disaster recovery 2 TB cluster | redis.logic.sharding.drredismdb2048g.128db.0rodb.128proxy.default | 128 | 1,280,000 | 12,288 | 128-core | 12,800,000 | Zone-disaster recovery cluster instance |

| Type | InstanceClass (used in API operations) | Number of nodes | Maximum concurrent connections | Maximum internal network bandwidth (MB) | CPU processing capacity | QPS reference value | Description |
|---|---|---|---|---|---|---|---|
| Zone-disaster recovery 4 TB cluster | redis.logic.sharding.drredismdb4096g.256db.0rodb.256proxy.default | 256 | 2,560,000 | 24,576 | 256-core | 25,600,000 | Zone-disaster recovery cluster instance |

QPS performance reference

QPS performance

| Type | Maximum concorrent connections | Maximum internal network bandwidth (MB) | CPU processing capacity | QPS reference value |
|---|---|---|---|---|
| 8 GB | 10,000 | 24 | Single-core | 80,000 |

Note:

QPS reference values of non-cluster instances range from 80,000 to 100,000. QPS reference values of cluster instances are the number of nodes multiplied by the value from 80,000 to 100,000.

QPS testing method

Figure 13-1: Network topology

ECS instance type

| Operating system | CPU | Memory | Region | Quantity |
| --- | --- | --- | --- | --- |
| Ubuntu 14.04 64-bit | 1 | 2,048 MB | China ( Shenzhen) | 3 |

**Procedure**

1. Download the source code package for redis-2.8.19 to three ECS instances.

```
$ wget http :// download . redis . io / releases / redis - 2 . 8
. 19 . tar . gz
$ tar xzf redis - 2 . 8 . 19 . tar . gz
$ cd redis - 2 . 8 . 19
$ make
$ make install
```

2. Run the following command on these ECS instances at the same time.

```
redis - benchmark - h ***********. m . cnsza . kvstore .
aliyuncs . com - p 6379 - a password - t set - c 50 -
d 128 - n 25000000 - r 5000000
```

3. Summarize the testing data on these ECS instances. The total QPS is the sum of the QPS on each ECS instance.

## 13.2 Error code table

| Error code description | Code | message | httpStatusCode |
| --- | --- | --- | --- |
| The API called by the subaccount is unauthorized. | Forbidden.RAM | User not authorized to operate on the specified resource, or this API doesn’t support RAM. | 403 |
| The operation is unavailable in RAM mode. | Forbedden. NotSupportRAM | This action does not support accessed by RAM mode. | 403 |
| An exception or error occurs on the server. | ServiceUnavailable | The request has failed due to a temporary failure of the server. | 503 |
| The input instance status does not exist . | InvalidStatus. NotFound | The Status provided does not exist in our records. | 404 |

| Error code description | Code | message | httpStatusCode |
| --- | --- | --- | --- |
| The input parameter is invalid. | InvalidParameter | The specified parameter InstanceName is not valid. | 400 |
| A common user calls on management APIs. | Forbbiden.NotAdminUser | User not authorized to operate on the specified API as you are not the administrator. | 403 |
| The parameter is missing. | MissingParameter | Specified parameter is missing. | 400 |
| At least one of the InstanceName and NewPassword is included. | MissingParameter | InstanceName/NewPassword at least one is mandatory for this action. | 400 |
| No OwnerId is specified when this API is called. | MissingParameter | The input parameter OwnerId, OwnerAccount that is mandatory for processing this request is not supplied. | 403 |
| The specified Token is invalid. | InvalidToken.Malformed | The Specified parameter "Token" is not valid. | 400 |
| The specified InstanceName is invalid. | InvalidInstanceName.Malformed | The Specified parameter "InstanceName" is not valid. | 400 |
| The specified Password is invalid. | InvalidPassword.Malformed | The Specified parameter "Password" is not valid." | 400 |

| Error code description | Code | message | httpStatusCode |
| --- | --- | --- | --- |
| The specified Instances is invalid. | InvalidInstances.Malformed | The Specified parameter "Instances" is not valid. | 400 |
| The specified StartTime is invalid. | InvalidStartTime.Malformed | The Specified parameter "StartTime" is not valid. | 400 |
| The specified EndTime is invalid. | InvalidEndTime.Malformed | The Specified parameter "EndTime" is not valid. | 400 |
| The specified InstanceIds is invalid. | InvalidInstanceIds.Malformed | The Specified parameter "InstanceIds" is not valid. | 400 |
| The balance is insufficient. | InsufficientBalance | Your account does not have enough balance. | 400 |
| You have not performed real-name authentication. | RealNameAuthenticationError | Your account has not passed the real-name authentication yet. | 403 |
| The purchase quantity has exceeded the limit. | QuotaExcee | Living afterpay instances quota exceeded. | 400 |
| The capacity configuration is invalid. | InvalidCapacity.NotFound | The Capacity provided does not exist in our records. | 400 |
| A used client token is used for the request. However, the content of the request is different from that of the previous request with the used token. | IdempotentParameterMismatch | Request uses a client token in a previous request but is not identical to that request. | 400 |

| Error code description | Code | message | httpStatusCode |
| --- | --- | --- | --- |
| The storage in the specified zone is insufficient. | QuotaNotEnough | Quota not enough in this zone. | 400 |
| You are not authorized to call the order-class APIs. | Forbbiden.SubUser | The specified action is not available for you. | 403 |
| Access is denied by the Alibaba Cloud risk control system. | Forbidden.RiskControl | This operation is forbidden by Aliyun Risk Control system. | 403 |
| The specified Region does not exist. | InvalidRegion.NotFound | The RegionId or ZoneId provided does not exist in our records. | 404 |
| The specified ZoneId is invalid. | InvalidZoneId.NotFound | The ZoneId provided is invalid. | 400 |
| The instance ID does not exist. | InvalidInstanceId.NotFound | The InstanceId provided does not exist in our records. | 404 |
| The password is incorrect. | IncorrectPassword | The Password provided is not correct. | 400 |
| The service is unavailable. | ServiceNotSupported | The specified service is not supported. | 400 |
| A renewal and configuration change order does not take effect. | HasRenewChangeOrder | This instance has a renewChange order. | 400 |
| An internal error occurs. | InternalError | The request processing has failed due to some unknown error. | 500 |
| The backup time is invalid. | InvalidPreferredBackupTime | Specified preferred backup time is not valid. | 400 |

| Error code description | Code | message | httpStatusCode |
| --- | --- | --- | --- |
| The input backup type is invalid. | InvalidBackupType.Format | Specified backup type is not valid. | 400 |
| The input backup method is invalid. | InvalidBackupMethod.Format | Specified backup method is not valid. | 400 |
| A backup job already exists, which is not supported. | BackupJobExists | A backup job already exists in the specified DB instance. | 400 |
| The number of backup times exceeds the limit. | BackupTimesExceeded | Exceeding the daily backup times of this DB instance. | 400 |
| Input at least one parameter. | ParameterLeastAssociate | Must input at least one optional parameter. | 400 |
| The input backup retention period is invalid. | InvalidBackupRetentionPeriod.Malformed | Specified backup retention period is not valid. | 400 |
| The input next backup time is invalid. | InvalidPreferredBackupTime.Format | Specified preferred backup time is not valid. | 400 |
| The input backup cycle is invalid. | InvalidPreferredBackupPeriod.Malformed | Specified backup period is not valid. | 400 |
| The current instance type does not support this operation. | IncorrectDBInstanceType | Current DB instance type does not support this operation | 400 |
| The input key is invalid. | InvalidKey.Malformed | Specified key is not valid. | 400 |
| The signature is used. | SignatureNonceUsed | Specified signature nonce was used already. | 400 |
| No virtual IP address can be assigned. | AllocateVpcIp.NotEnough | Ip resource is not enough | 400 |

| Error code description | Code | message | httpStatusCode |
| --- | --- | --- | --- |
| Instances of the specified type cannot be created in the zone. | Zone.NotSupport | Specified zone does not support creating with instance class. | 400 |
| The specification code is invalid. | MissingClassCode | Capacity or InstanceClass is mandatory for this action. | 400 |
| The specified instance type is not supported. | InvalidDBInstanceClass.NotFound | Specified DB instance class is not found. | 404 |
| The instance is locked. | IncorrectDBInstanceLockMode | Current DB instance lock mode does not support this operation. | 400 |
| The backup set ID does not exist. | InvalidBackupSetID.NotFound | Specified backup set ID does not exist. | 400 |
| The instance status does not support this operation. | IncorrectDBInstanceState | Current DB instance state does not support this operation. | 400 |
| The resources are insufficient. | InsufficientResourceCapacity | There is insufficient capacity available for the requested instance. | 400 |
| The input end time is invalid. | InvalidEndTime.Format | Specified end time is not valid. | 400 |
| The input duration for reserving a classic IP address in invalid. | InvalidClassicExpiredDays.Format | The specified classicExpiredDays format is not valid. | 400 |
| The backup set status does not support this operation. | IncorrectBackupSetState | Current backup set state does not support operations. | 400 |

| Error code description | Code | message | httpStatusCode |
| --- | --- | --- | --- |
| The whitelist format is invalid. | InvalidSecurityIPList.Format | Specified security IP list format is not valid. | 400 |

## 13.3 Instance configurations table

Table 13-1: The following table describes parameter configuration of ApsaraDB for Redis instances.

| Parameter | Meaning | Parameter value |
| --- | --- | --- |
| maxmemory-policy | The eviction policy when the memory exceeds the threshold value. ApsaraDB for Redis supports six data eviction policies. | · VolatileLRU: Original data is evicted based on the LRU algorithm, but only data with an expiration time is evicted.<br>· VolatileTTL: Only data with an expiration time is evicted based on the TTL values in ascending order.<br>· AllKeysLRU: Original data is evicted based on the LRU algorithm.<br>· VolatileRandom: Original data is evicted randomly, but only data with an expiration time is evicted.<br>· AllKeysRandom: Original data is evicted randomly.<br>· NoEviction: No data is evicted, and an error message is returned when new data is written. |

| Parameter | Meaning | Parameter value |
| --- | --- | --- |
| hash-max-ziplist-entries | A hash object uses ziplist encoding only if the hash object meets both of the following conditions:<br>· The number of key-value pairs stored in the hash object is smaller than or equal to the value of list-max-ziplist-entries.<br>· The string lengths of keys and values in all key-value pairs stored in the hash object are smaller than or equal to the value of list-max-ziplist-value. | Default value: 512 |
| hash-max-ziplist-value | A hash object uses ziplist encoding only if the hash object meets both of the following conditions:<br>· The number of key-value pairs stored in the hash object is smaller than or equal to the value of list-max-ziplist-entries.<br>· The string lengths of keys and values in all key-value pairs stored in the hash object are smaller than or equal to the value of list-max-ziplist-value. | Default value: 64 |

| Parameter | Meaning | Parameter value |
| --- | --- | --- |
| list-max-ziplist-entries | A list object uses ziplist encoding only if the list object meets both of the following conditions:<br>· The number of key-value pairs stored in the list object is smaller than or equal to the value of list-max-ziplist-entries.<br>· The string lengths of keys and values in all key-value pairs stored in the list object are smaller than or equal to the value of list-max-ziplist-value. | Default value: 512 |
| list-max-ziplist-value | A list object uses ziplist encoding only if the list object meets both of the following conditions:<br>· The number of key-value pairs stored in the list object is smaller than or equal to the value of list-max-ziplist-entries.<br>· The string lengths of keys and values in all key-value pairs stored in the list object are smaller than or equal to the value of list-max-ziplist-value. | Default value: 64 |

| Parameter | Meaning | Parameter value |
| --- | --- | --- |
| set-max-intset-entries | When a set object meets the conditions that the number of entries is smaller than or equal to the value of set-max-intset-entries and all entries are decimal integers, the set object uses intset encoding. | Default value: 512 |
| zset-max-ziplist-entries | A zset object uses ziplist encoding only if the zset object meets both of the following conditions:<br>· The number of key-value pairs stored in the zset object is smaller than or equal to the value of zset-max-ziplist-entries.<br>· The string lengths of keys and values in all key-value pairs stored in the zset object are smaller than or equal to the value of zset-max-ziplist-value. | Default value: 128 |

| Parameter | Meaning | Parameter value |
| --- | --- | --- |
| zset-max-ziplist-value | A zset object uses ziplist encoding only if the zset object meets both of the following conditions:<br>· The number of key-value pairs stored in the zset object is smaller than or equal to the value of zset-max-ziplist-entries.<br>· The string lengths of keys and values in all key-value pairs stored in the zset object are smaller than or equal to the value of zset-max-ziplist-value. | Default value: 64 |

| Parameter | Meaning | Parameter value |
| --- | --- | --- |
| notify-keyspace-events | The keyspace notifications allow clients to subscribe to channels or modes to receive events modifying Redis datasets in some way. | · - K: The keyspace notifications. All notifications are prefixed with `\ __keyspace \@ _ \ _ `.<br>· - E: The keyevent notifications. All notifications are prefixed with `__keyevent @ __`.<br>· - g: The notifications about general commands that are non-type specific, such as DEL, EXPIRE, and RENAME.<br>· - $: The string command notifications.<br>· - l: The list command notifications.<br>· - s: The set command notifications.<br>· - h: The hash command notifications.<br>· - z: The sorted set command notifications.<br>· - x: The expired events. An expired event is sent when an expired key is deleted.<br>· - e: The evicted events. An evicted event is sent when a key is evicted for maxmemory.<br>· - A: The alias for g$ lshzxe. |