

Alibaba Cloud ApsaraDB for MySQL

API Reference

Issue: 20190318

Legal disclaimer

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

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

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

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

Generic conventions

Table -1: Style conventions

Style	Description	Example
	This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: 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: 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: 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: 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 <code>cd / d C :/ windows</code> command to enter the Windows system folder.
<i>Italics</i>	It is used for parameters and variables.	<code>bae log list --instanceid Instance_ID</code>
[] or [a b]	It indicates that it is an optional value, and only one item can be selected.	<code>ipconfig [-all -t]</code>

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

Contents

Legal disclaimer.....	I
Generic conventions.....	I
1 Use APIs.....	1
1.1 Public parameters.....	1
1.2 Request structure.....	3
1.3 Signature.....	4
2 Instance management.....	8
2.1 DescribeDBInstanceSwitchLog.....	8
2.2 DestroyDBInstance.....	9
2.3 ModifyDBInstanceDelayReplicationTime.....	10
2.4 Create an RDS instance.....	11
2.5 Delete an RDS instance.....	18
2.6 Restart an RDS instance.....	19
2.7 View instance attributes.....	20
2.8 View the RDS instance list.....	27
2.9 Change the RDS instance type.....	32
2.10 View RDS region and zone information.....	34
2.11 Clear RDS instance logs.....	35
2.12 Upgrade the database version of an RDS instance.....	36
2.13 Modify the RDS instance maintenance time.....	38
2.14 Create a read-only instance.....	39
3 Read/Write splitting.....	42
3.1 ModifyDBInstanceConnectionMode.....	42
3.2 Check system-distributed weights.....	42
3.3 Modify the basic information of read/write splitting.....	43
3.4 Release a read/write splitting address.....	46
4 Network management.....	47
4.1 Change the expiration time of the original classic endpoint.....	47
4.2 Modify connection string.....	48
4.3 Modify the network type of an RDS instance.....	48
5 Log management.....	51
5.1 Query whether SQL audit is enabled.....	51
5.2 View error logs.....	51
5.3 View binlogs.....	54
5.4 ModifySQLCollectorPolicy.....	57
5.5 Query SQL audit logs.....	58
5.6 Query the SQL audit file list.....	62
6 Backup and recovery.....	64
6.1 Create backups.....	64

6.2 View the backup list.....	66
6.3 Create a temporary instance.....	69
6.4 View the backup policy.....	71
6.5 Modify the backup policy.....	73
6.6 Recover a backup set to an instance.....	79
6.7 DescribeBackupTasks.....	80
6.8 View log files.....	81
7 Migrate SQL Server to the cloud.....	84
7.1 Create a task of migrating data to RDS.....	84
7.2 Obtain the migration task list.....	86
7.3 Check the file details about the task of migrating data to RDS.....	89
8 Tag management.....	92
8.1 Bind tags.....	92
8.2 Query tags.....	93
8.3 Unbind tags.....	94
9 Appendix.....	96
9.1 Client error code table.....	96
9.2 Server error code table.....	105
9.3 Instance status table.....	105
9.4 Performance parameter table.....	106
9.5 Forbidden keywords table.....	109
10 API overview.....	111

1 Use APIs

1.1 Public parameters

Public request parameters

Public request parameters refer to the request parameters that every interface must use.

Name	Type	Required or not	Description
Format	String	No	Type of the returned value. Values: JSON and XML. Default value: JSON.
Version	String	Yes	API version number. Format: YYYY-MM-DD (date). The current version number is 2016-11-01.
AccessKeyId	String	Yes	Secret key ID issued by Alibaba for user access
Signature	String	Yes	Signature result string. For more information about the signature calculation method, see Signature .
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: <code>YYYY-MM-DDThh:mm:ssZ</code> , for example, <code>2013-08-15T12:00:00Z</code> (20:00:00, August 15, 2013, Beijing time).
SignatureVersion	String	Yes	Signature algorithm version. The current version is 1.0
SignatureNonce	String	Yes	Unique random number, used to prevent replay attacks. Different random numbers are used for different requests.

Public return parameters

Each time the you sends a call request to an interface, the system returns a unique identification code (RequestId) no matter whether the request is successful or not.

Request example

```
https :// rds . aliyuncs . com /
Format = xml
& Version = 2014 - 08 - 15
& Signature = Pc5WB8gokV n0xfeu % 2FZV % 2BiNM1dgI % 3D
& SignatureM ethod = HMAC - SHA1
& SignatureN once = 1521552885 2396
& SignatureV ersion = 1 . 0
& AccessKeyI d = key - test
& OwnerId = 12345678
& Timestamp = 2014 - 10 - 10T12 : 00 : 00Z
```

Returned results

After the API service is called, data is returned in a unified format. The returned HTTP status code 2xx indicates that the call is successful. The returned HTTP status code 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 generate a parameter to define the format of returned data, which is XML by default. In this document, examples of returned results are formatted in a way that is easier to view. The actual returned results do not contain line breaks and indentation.

Successful results

Returned XML results include the request processing result (successful or failed) and the specific service data. Example:

```
<? xml version =" 1 . 0 " encoding =" utf - 8 "? >
<!-- Result Root Node -->
< Interface Name + Response >
  <!-- Return Request Tag -->
  < RequestId > 4C467B38 - 3910 - 447D - 87BC - AC049166F2 16 </
  RequestId >
  <!-- Returned Result Data -->
</ Interface Name + Response >
```

JSON format:

```
" RequestId ": " 4C467B38 - 3910 - 447D - 87BC - AC049166F2 16 ",
/* Returned Result Data */
```

Error results

When an error occurs in an interface call, no result is returned. You can refer to [Client error code table](#) to identify the error cause.

When an error occurs in a call, the HTTP status code 4xx or 5xx is returned for the HTTP request. The returned message body contains the specific error code and error message. The message body also contains the globally unique RequestId and the requested HostId. If you cannot identify the error cause, contact Alibaba Cloud Customer Service for help and provide the HostId and RequestId for support engineers to solve the problem as quickly as possible.

XML format:

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

1.2 Request structure

Endpoint

The access address for the RDS API service is rds.aliyuncs.com.

Communication protocol

Support request communication over HTTP or HTTPS. You are advised to send requests using HTTPS for higher security.

Request methods

You can send requests through the HTTP GET method. This method requires that parameters be included in the request URL.

Request parameters

Each request must specify the action to be performed, namely, the action parameter (for example, `CreateData base`). Each action must include public request parameters and the request parameters of the specified action.

Character encoding

Requests and responses are encoded using UTF-8.

1.3 Signature

RDS performs authentication on each access request. Therefore, each request, whether being sent by HTTP or HTTPS, must contain signature information. RDS performs symmetric encryption using the ‘Access Key ID’ and ‘Access Key Secret’ to authenticate the request sender. The Access Key ID and Access Key Secret are officially issued to visitors by Alibaba Cloud (visitors can apply for and manage them at Alibaba Cloud’s official website). The Access Key ID indicates the identity of the visitor. The Access Key Secret is the secret key used to encrypt and verify the signature string on the server. It must be kept confidential and only be available to Alibaba Cloud and you.

When you call a server, the following method is used to sign the request:

1. Construct a normalized request string (Canonicalized Query String) using request parameters.
 - a. Request parameters are ordered alphabetically by their names (including public request parameters and user-defined parameters for the given request interfaces described in this document, but excluding the Signature parameter mentioned in public request parameters).



Notice:

For a request submitted using the GET method, these parameters constitute the parameter section of the request URL (that is, the section in the URL following “?” and connected by “&”).

- b. The name and value of each request parameter are encoded. The names and values must be URL-encoded using the UTF-8 character set. The URL encoding rules are as follows:
 - A. The characters A-Z, a-z, 0-9, and “-”, “_”, “.”, “~” are not encoded.
 - B. Other characters are encoded in “%XY” format, with XY representing the characters’ ASCII code in hexadecimal notation. For example, the English double quotes (“) are encoded as %22.
 - C. Extended UTF-8 characters are encoded in “%XY%ZA...” format.
 - D. It must be noted that an English space is encoded as %20, rather than the plus sign (+).



Notice:

Generally, libraries that support URL encoding (such as Java’s `java.net.URLEncoder`) encode characters according to the rules for the MIME-type “application/x-www-form-urlencoded”. If this encoding method is used, replace the plus signs (+) in the encoded strings with %20, the asterisks (*) with %2A, and change %7E back to the tilde (~) to conform to the preceding encoding rules.

- c. Connect the encoded parameter names and values with the equal sign (=).
 - d. Sort the parameter name and value pairs connected by equal signs in alphabetical order, and connect them with the (&) symbol to produce the Canonicalized Query String.
2. Follow the following rules to construct the string used for signature calculation by using the Canonicalized Query String constructed in the previous step:

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

```
percentEncode ( CanonicalizedQueryString )
```

Parameter description:

- **HTTPMethod**: the HTTP method used for request submission, for example, GET.
 - **percentEncode(“/ “)**: the coded value for the character “/ “ according to the URL encoding rules described in 1.b, namely, “%2F” .
 - **percentEncode(CanonicalizedQueryString)**: the encoded string of the Canonicalized Query String constructed in Step 1, produced by following the URL encoding rules described in 1.b.
3. Use the preceding signature sting to calculate the signature’ s HMAC value based on RFC2104 definitions.



Notice:

The Key used for calculating the signature is the Access Key Secret held by you, which ends with the “&” character (ASCII:38) and is based on the SHA1 hashing.

4. According to Base64 encoding rules, encode the preceding HMAC value into a string, which gives you the signature value.
5. Add the obtained signature value to the request parameters as the Signature parameter, which completes the request signing process.



Note:

When the obtained signature value is submitted to the RDS server as the final request parameter value, the value is URL-encoded like other parameters according to RFC3986 rules.

DescribeDBInstances is used as an example. The request URL before signature is as follows:

```
http :// rds . aliyuncs . com /? Timestamp = 2013 - 06 - 01T10
: 33 : 56Z & Format = XML & AccessKeyI d = testid & Action =
DescribeDB Instances & SignatureM ethod = HMAC - SHA1 & RegionId
= region1 & SignatureN once = NwDaxvLU6t FE0DVb & Version = 2014
- 08 - 15 & SignatureV ersion = 1 . 0
```

Thus, the StringToSign is:

```
GET &% 2F & AccessKeyI d % 3Dtestid & Action % 3DDescribe
DBInstance s & Format % 3DXML & RegionId % 3Dregion1 & SignatureM
ethod % 3DHMAC - SHA1 & SignatureN once % 3DNwDaxvLU 6tFE0DVb &
```



```
SignatureVersion % 3D1 . 0 & Timestamp % 3D2013 - 06 - 01T10 %
253A33 % 253A56Z & Version % 3D2014 - 08 - 15
```

Assume 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 is:

```
BIPOMlu8LX BeZtLQkJTw 6iFvw1E =
```

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

```
http://rds.aliyuncs.com/?Timestamp=2013-06-01T10%
3A33%3A56Z&Format=XML&AccessKeyId=testid&Action=
DescribeDBInstances&SignatureMethod=HMAC-SHA1&RegionId
=region1&SignatureNonce=NwDaxvLU6tFE0DVb&SignatureV
ersion=1.0&Version=2014-08-15&Signature=BIPOMlu8LX
BeZtLQkJTw6iFvw1E%3D
```

2 Instance management

2.1 DescribeDBInstanceSwitchLog

This API is used to view the master/slave switchover log. This API is no longer supported.

Description

**Note:**

This API is no longer supported.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: DescribeDBInstanceSwitchLog
DBInstanceId	String	Yes	Instance ID.
StartTime	String	Yes	Log start time. Example: 2011-06-11T15:00Z
EndTime	String	Yes	Log end time, which must be later than the start time. Example: 2011-06-11T16:00Z
PageSize	Integer	Yes	Maximum number of records on each page. Values: 30/50/100. Default value: 30
PageNumber	Integer	Yes	Page number, which is greater than 0 and does not exceed 30. Default value: 1

Response parameters

Parameter	Type	Description
RequestId	String	See Public parameters .
DBInstanceId	String	Instance ID.
TotalRecordCount	Integer	Total number of records.

Parameter	Type	Description
PageNumber	Integer	Current page number.
PageRecord Count	Integer	Maximum number of records on each page.
Items	List	List of swithover log entries.

Items

Parameter	Type	Description
SwitchId	String	Instance ID.
SwitchCauseCode	String	Reason for the switchover.
SwitchStartTime	String	Start time of the switchover.
SwitchFinishTime	String	End time of the switchover.
TotalSessions	String	Total number of sessions at the time of the switchover.
AffectedSessions	String	Number of sessions affected by the switchover

2.2 DestroyDBInstance

This API is used to destroy RDS instances. This API is no longer supported.



Note:

This API is no longer supported.

Prerequisite: The instance is locked.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	Action to perform. Value: DestroyDBInstance
DBInstanceId	String	Yes	Instance ID.

Parameter	Type	Required	Description
AccessKeyId	String	No	AccessKey ID used to access Alibaba Cloud services.
ClientToken	String	No	Used to guarantee idempotence.
OwnerAccount	String	No	Your AlibabaCloud account used to log in to the RDS console.

Response parameters

Parameter	Type	Description
RequestId	String	Request ID.

Request example

```
https://rds.aliyuncs.com/?Action=DestroyDBInstance&DBInstanceId=rdsaiabna-iiabn&CommonResponseParameter[CommonResponseParameter]>
```

Response example

JSON format

```
{
  "RequestId": "65BDA532-28AF-4122-AA39-B382721EEE64"
}
```

2.3 ModifyDBInstanceDelayReplicationTime

This API is used to modify the replication delay of read-only instances. This API is no longer supported.



Note:

This API is no longer supported.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	Action to perform. Value: ModifyDBInstanceDelayedReplicationTime
DBInstanceId	String	Yes	Read-only instance ID.

Parameter	Type	Required	Description
ReadSQLReplicationTime	Integer	Yes	Replication delay of read-only instances. Unit: second. Default value: 0.

Response parameters

Parameter	Type	Description
RequestId	String	See Public parameters .
DBInstanceId	String	Instance ID.
DelayedReplicationTime	String	Replication delay.
TaskId	String	Task ID.

2.4 Create an RDS instance

Description

This API is used to create an RDS instance. For more information about instance types, see [Instance type list](#).

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: CreateDBInstance.
RegionId	String	Yes	Data center. The length of this parameter cannot exceed 50 characters. The DescribeRegions function can be used to view available data centers.

Name	Type	Required or not	Description
ZoneId	String	No	Zone ID. The DescribeRegions function can be used to view available zones.
Engine	String	Yes	Database type. Value range: MySQL / SQLServer / PostgreSQL / PPAS
EngineVersion	String	Yes	Database version. Value range: - MySQL: 5.5 / 5.6 / 5.7 - SQLServer: 2008r2 / 2012 / 2012_web / 2016_web / 2012_std_ha / 2012_ent_ha / 2016_std_ha / 2016_ent_ha - PostgreSQL: 9.4 - PPAS: 9.3
DBInstanceClass	String	Yes	Instance type. For more information, see Instance type list .

Name	Type	Required or not	Description
DBInstanceStorage	Integer	Yes	User-defined storage space. Value range: • [5, 2000] for MySQL/PostgreSQL/PPAS HA dual-node edition • [20,1000] for MySQL 5.7 basic single-node edition • [10, 2000] for SQL Server 2008R2 • [20,2000] for SQL Server 2012 basic single-node edition • [20,5000] for SQL Server 2012 basic dual-node edition Increase progressively at a rate of 5 GB. The unit is GB. For more information, see Instance type list.
DBInstanceNetType	String	Yes	Network connection type of an instance. Value range: • Internet : public network • Intranet : private network

Name	Type	Required or not	Description
DBInstanceDescription	String	No	• Instance description or remarks, no more than 256 bytes • It cannot contain http:> instance descriptions or remarks and cannot exceed 256 bytes. • It cannot begin with http:// or https://. • It must start with a Chinese character or an English letter. • It may contain Chinese and English characters /letters, “_”, “-“, and numbers. The length may be 2-256 characters.

Name	Type	Required or not	Description
SecurityIP List	String	Yes	- List of IP addresses allowed to access all databases of an instance. The IP addresses are separated by commas and cannot be repeated. The list contains up to 1,000 IP addresses. - Supported formats include 0.0.0.0/0, 10.23.12.24 (IP), and 10.23.12.24/24 (Classless Inter-Domain Routing (CIDR) mode. /24 represents the length of the prefix in an IP address. The range of the prefix length is [1,32].) 0.0.0.0/0 indicates unrestricted.
PayType	String	Yes	Billing method. Value range: - Postpaid : Pay-As-You-Go - Prepaid : Subscription

Name	Type	Required or not	Description
Period	String	No	This input parameter is required if PayType is set to Prepaid . The prepayment consists of two types: Year (yearly) and Month (monthly).
UsedTime	String	No	- When the value of parameter Period is Year , the value range of UsedTime is [1,9]. - When the value of parameter Period is Month , the value range of UsedTime is 1, 2, 3.
ClientToken	String	Yes	Used to guarantee idempotence.
InstanceNetworkType	String	No	- VPC : VPC - Classic : classic network If no value is specified, a classic network is created by default.

Name	Type	Required or not	Description
Connection Mode	String	No	- Performance : standard access mode - Safety : high security access mode The RDS system assigns an access mode by default.
VPCId	String	No	VPC ID
VSwitchId	String	No	VSwitch ID
PrivateIpAddress	String	No	IP address of an VPC under VSwitchId . If no value is specified, the system automatically assigns a VPC IP address.

Return parameters

Name	Type	Description
<Public return parameters>	-	For more information, see Public parameters .
DBInstanceId	String	Instance ID
OrderId	String	Order ID
Connection String	String	Database connection address
Port	String	Port connecting to the database

Request example

```
https://rds.aliyuncs.com/?Action=CreateDBInstance
&RegionId=cn-hangzhou
&Engine=MySQL
&EngineVersion=5.6
&DBInstanceClass=rds.mys2.small
&DBInstanceStorage=5
```

```
& DBInstance NetType = Internet
& SecurityIP List = 11 . 11 . 11 . 11
& PayType = Postpaid
& ClientToken = ETnLKlblzc zsh0TUb0Cz iJZNwHLYBQ
&<[ Public Request Parameters ]>
```

Response example

XML format

```
< CreateDBInstanceResponse >
  < OrderId > 1007893702 30206 </ OrderId >
  < Connection String > rdsaiiabna iiabn . mysql . rds . aliyuncs . com </ Connection String >
  < DBInstance Id > rdsaiiabna iiabn </ DBInstance Id >
  < port > 3306 </ port >
  < RequestId > 1E43AAE0 - BEE8 - 43DA - 860D - EAF2AA0724 DC </ RequestId >
</ CreateDBInstanceResponse >
```

JSON format

```
{
  "OrderId": "1007893702 30206",
  "Connection String": "rdsaiiabna iiabn . mysql . rds . aliyuncs . com",
  "DBInstance Id": "rdsaiiabna iiabn",
  "Port": "3306",
  "RequestId": "1E43AAE0 - BEE8 - 43DA - 860D - EAF2AA0724 DC"
}
```

2.5 Delete an RDS instance

Description

This API is used to release an RDS instance. An instance can be deleted only if it meets the following conditions:

- The instance is running.
- The instance is a master instance, read-only instance, disaster recovery instance, or temporary instance.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: DeleteDBInstance.
DBInstance Id	String	Yes	Instance ID

Return parameters

Name	Type	Description
<Public return parameters>	-	For more information, see Public parameters .

Request example

```
https://rds.aliyuncs.com/?Action=DeleteDBInstance  
&DBInstanceId=rdsaiiabna-iiabn  
&<[PublicRequestParameters]>
```

Response example

XML format

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

JSON format

```
"RequestId": "65BDA532-28AF-4122-AA39-B382721EEE64"
```

2.6 Restart an RDS instance

Description

This API is used to restart an instance. Generally, an RDS instance can be restarted within 10s. If a large number of transactions must be submitted or rolled back, the restart may take about one minute. An instance can be restarted only if it meets the following conditions:

- The instance is running.
- There is no running backup task in the instance.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: RestartDBInstance.
DBInstanceId	String	Yes	Instance ID

Return parameters

Name	Type	Description
<Public return parameters>	-	For more information, see Public parameters .

Request example

```
https://rds.aliyuncs.com/?Action=RestartDBInstance
&DBInstanceId=rdsaiiabna-iiabn
&<PublicRequestParameters>
```

Response example

XML format

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

JSON format

```
"RequestId": "65BDA532-28AF-4122-AA39-B382721EEE64"
```

2.7 View instance attributes

Description

This API is used to query detailed attributes of a specified instance.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: DescribeDBInstanceAttributes
DBInstanceId	String	Yes	Instance ID. Up to 30 IDs can be entered at a time, which are separated by commas (,).

Return parameters

Name	Type	Description
<Public Return Parameters>	-	For more information, see Public parameters .
Items	List<DBInstanceAttribute>	-

Parameter of DBInstanceAttribute

Name	Type	Description
DBInstance Id	String	Instance ID
PayType	String	- Postpaid : Pay-As-You-Go - Prepaid : Subscription
Dbinstance type	String	- Primary : primary instance - Readonly : read-only instance - Guard : disaster recovery instance - Temp : temporary instance
Category	String	- Basic : basic edition (single-node) - Standard : standard edition (high-available) - Enterprise : enterprise edition
InstanceNetworkType	String	- Classic : classic network - VPC : VPC
Connection Mode	String	- Performance : standard access mode - Safety : high security access mode

Name	Type	Description
RegionId	String	Region ID
ZoneId	String	Zone ID
Connection String	String	Connection address
Port	String	Application access port
Engine	String	Database type
Engineversion	String	Database version
DBInstanceClassType	String	Instance type family. Value range: - s : Shared instance - x : General Instance - d : Dedicated instance; - h : Dedicated-host instance
DBInstanceClass	String	Instance type
DBInstanceMemory	Long	Instance memory. Unit: MB.
DBInstanceStorage	Integer	Instance storage space. Unit: GB.
DBInstanceNetType	String	- Internet : public network - Intranet : private network
DBInstanceStatus	String	For instance status, see Instance status table .
DBInstanceDescription	String	Instance remarks

Name	Type	Description
LockMode	String	- Unlock : normal - ManualLock : locked when manually triggered - LockByExpiration : automatically locked upon expiration - LockByRestoration : automatically locked before instance rollback - LockByDiskQuota : automatically locked upon full instance space
LockReason	String	Reason why an instance is locked
DBMaxQuantity	Integer	Maximum number of databases that can be created for an instance
AccountMaxQuantity	Integer	Maximum number of accounts that can be created
CreationTime	String	Creation time. Format: YYYY-MM-DDThh:mm:ssZ, for example, 2011-05-30T12:11:4Z.
ExpireTime	String	Expiration time. Pay-As-You-Go instances never expire.
MaintainTime	String	Instance maintenance time. For example, 00:00Z-02:00Z indicates that routine maintenance can be performed from 0:00 to 2:00.
AvailabilityValue	String	Instance availability status of the current year. Unit: percentage.

Name	Type	Description
MaxIOPS	Integer	Maximum number of I/O requests, namely, IOPS
MaxConnections	Integer	Maximum number of concurrent connections to an instance
MasterInstanceId	String	Primary instance ID. If this parameter is not returned (that is, if it is null), the current instance is a primary instance.
IncrementalSourceDBInstanceId	String	Instance ID of the incremental data source. For example, a disaster recovery instance's incremental data source is a primary instance. A read-only instance's incremental data source is a primary instance, and a primary instance's incremental data source is NULL.
GuardDBInstanceId	String	ID of a disaster recovery instance if it is attached to the current instance
TempDBInstanceId	String	ID of a temporary instance if it is attached to the current instance
ReadOnlyDBInstanceIds	List<OnlyDBInstanceId>	ID list of read-only instances attached to the primary instance
SecurityIPList	String	Deprecated. For more information, see DescribeDBInstanceIPArrayList .

Name	Type	Description
AdvancedFeatures	String	Currently only valid for SQL Server instances. Obtain advanced property values, and separate multiple values by commas (,). The return value is - LinkedServer -. Distribute Transaction

ReadOnlyDBInstanceId

Name	Type	Description
<Public return parameters>	-	For more information, see Public parameters .
DBInstanceId	String	ID of a read-only instance

Request example

```
https://rds.aliyuncs.com/?Action=DescribeDBInstanceAttribute
&DBInstanceId=rdsaiiabna-iiabn
&<PublicRequestParameters>
```

Return example

XML format

```
<CreateDBInstanceResponse>
  <RequestId>3C5CFDEE-F774-4DED-89A2-1D76EC63C575</RequestId>
  <Items>
    <DBInstanceAttribute>
      <LockMode>Unlock</LockMode>
      <ConnectionString>rdsfnjfqu7vjnuj.mysql.rds.aliyuncs.com</ConnectionString>
      <CreationTime>2014-10-10T10:28:48Z</CreationTime>
    </DBInstanceAttribute>
    <DBInstanceNetType>Internet</DBInstanceNetType>
    <MaxConnections>60</MaxConnections>
    <LockReason></LockReason>
    <Engine>MySQL</Engine>
    <Value>100.0%</value>
    <AccountMaxQuantity>50</AccountMaxQuantity>
    <DBMaxQuantity>200</DBMaxQuantity>
    <RegionId>cn-hangzhou</RegionId>
    <ZoneId>cn-hangzhou-a</ZoneId>
    <ReadOnlyDBInstanceId></ReadOnlyDBInstanceId>
    <TempDBInstanceId></TempDBInstanceId>
    <DBInstanceMemory>240</DBInstanceMemory>
  </Items>
</CreateDBInstanceResponse>
```

```

    < MaxIOPS > 150 </ MaxIOPS >
    < DBInstance Type > Primary </ DBInstance Type >
    < DBInstance Status > Running </ DBInstance Status >
    < MasterInst anceId ></ MasterInst anceId >
    < EngineVers ion > 5 . 5 </ EngineVers ion >
    < Increments ourceDBIns tanceId ></ Increments ourceDBIns
tanceId >
    < GuardDBIns tanceId ></ GuardDBIns tanceId >
    < DBInstance Storage > 10 </ DBInstance Storage >
    < DBInstance Descriptio n ></ DBInstance Descriptio n >
    < DBInstance Id > rdsfnjfq7 vjnuj </ DBInstance Id >
    < Paytype > postpaid </ paytype >
    < ExpireTime ></ ExpireTime >
    < MaintainTi me ></ MaintainTi me >
    < DBInstance Class > rds . mys2 . small </ DBInstance Class >
    < SecurityIP List > 11 . 11 . 11 . 11 </ SecurityIP List >
    < Port > 3306 </ Port >
    < AdvancedFe atures > LinkedServ er , Distribute Transactio n
</ AdvancedFe atures >
    </ DBInstance Attribute >
</ CreateDBIn stanceResp onse >

```

JSON format

```

" Items ": {
  " DBInstance Attribute ": [
    {
      " LockMode ": " Unlock ",
      " Connection String ": " rdsfnjfq7 vjnuj . mysql . rds .
aliyuncs . com ",
      " CreationTi me ": " 2014 - 10 - 10T10 : 28 : 48Z ",
      " DBInstance NetType ": " Internet ",
      " ReadOnlyDB InstanceId s ": {
        " ReadOnlyDB InstanceId ": []
      },
      " MaxConnect ions ": 60 ,
      " LockReason ": "",
      " Engine ": " MySQL ",
      " Availabili tyValue ": " 100 . 0 %",
      " AccountMax Quantity ": 50 ,
      " DBMaxQuant ity ": 200 ,
      " RegionId ": " cn - hangzhou ",
      " TempDBInst anceId ": "",
      " DBInstance Memory ": 240 ,
      " MaxIOPS ": 150 ,
      " DBInstance Type ": " Primary ",
      " DBInstance Status ": " Running ",
      " MasterInst anceId ": "",
      " EngineVers ion ": " 5 . 5 ",
      " Increments ourceDBIns tanceId ": "",
      " GuardDBIns tanceId ": "",
      " DBInstance Storage ": 10 ,
      " DBInstance Descriptio n ": "",
      " DBInstance Id ": " rdsfnjfq7 vjnuj ",
      " PayType ": " Postpaid ",
      " ExpireTime ": "",
      " MaintainTi me ": "",
      " Maid ": " RDS . mys2 . small ",
      " SecurityIP List ": " 11 . 11 . 11 . 11 ",
      " Port ": " 3306 ",
      " AdvancedFe atures ": " LinkedServ er , Distribute
Transactio n "
    }
  ]
}

```

```
" RequestId ": " 27BB49FA - DA47 - 4162 - B39D - FC001E35C1 C1 "
```

2.8 View the RDS instance list

Description

This API is used to query the instance list or the instance list authorized by RAM.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: DescribeDBInstances.
RegionId	String	Yes	Instance region, viewed through theDescribeRegions.
Engine	String	No	Database type. Value range: MySQL , SQLServer , PostgreSQL , and PPAS . If no value is specified, all types are returned.
DBInstanceType	String	No	Instance type. Value range: - Primary : primary instance - Readonly : read-only instance - Guard : disaster recovery instance - Temp : temporary instance If no value is specified, all types are returned.
InstanceNetworkType	String	No	Value range: - VPC : VPC - Classic : classic network If no value is specified, both types are returned.
ConnectionMode	String	No	- Standard : standard access mode; - Safe : high security access mode. If no value is specified, both modes are returned.

Name	Type	Required or not	Description
Tags	String	No	Used to query instances bound to a specified tag. - The format is JSON string, including TagKey and TagValue . - TagKey cannot be empty but TagValue can, format example: {"key1": "value1 "}
PageSize	Integer	No	Number of records on each page. Value range : 30, 50, and 100. Default value: 30.
PageNumber	Integer	No	Page number, which must be greater than 0, but cannot exceed the maximum integer value. Default value: 1.

Return parameters

Name	Type	Description
<Public return parameters>	-	For more information, see Public parameters .
Databases	List<Database>	Data composed of databases
PageNumber	Integer	Page number
TotalRecordCount	Integer	Total number of records
PageRecordCount	Integer	Number of DB instances on the current page
Items	List<DBInstance>	Arrays composed of DB instances

Parameters for DBInstance

Name	Type	Description
DBInstanceId	String	Instance ID
DBInstanceDescription	String	Instance description
PayType	String	Billing method. Value options: - Postpaid : Pay-As-You-Go - Prepaid : Subscription

Name	Type	Description
DBInstanceType	String	- Primary : primary instance - Readonly : read-only instance - Guard : disaster recovery instance - Temp : temporary instance
InstanceNetworkType	String	- VPC : VPC - Classic : classic network
ConnectionMode	String	- Standard : standard access mode - Safe : high security access mode
RegionId	String	Region ID
Expiretime	String	Expiration time. Pay-As-You-Go instances never expire.
DBInstanceStatus	String	For more information, see Instance status table .
Engine	String	Database type
DBInstanceNetType	String	- Internet : public network - Intranet : private network
LockMode	String	- Unlock : normal - ManualLock : locked when manually triggered - LockByExpiration : automatically locked upon expiration - LockByRestoration : automatically locked before instance rollback - LockByDiskQuota : automatically locked upon full instance space
LockReason	String	Reason why an instance is locked
MasterInstanceId	String	Primary instance ID. If this parameter is not returned (that is, if it is null), the current instance is a primary instance.
GuardDBInstanceId	String	ID of a disaster recovery instance if it is attached to the current instance
TempDBInstanceId	String	ID of a temporary instance if it is attached to the current instance

Name	Type	Description
ReadOnlyDBInstanceId	List<ReadOnlyDBInstanceId>	ID list of read-only instances attached to the primary instance

ReadOnlyDBInstanceId parameters

Name	Type	Description
ReadOnlyDBInstanceId	String	ID of a read-only instance

Request example

```
https://rds.aliyuncs.com/?Action=DescribeDBInstances
&RegionId=cn-hangzhou
&Engine=MySQL
&<Public request parameters>
```

Response example

XML format

```
<DescribeDBInstancesResponse>
  <PageRecordCount>2</PageRecordCount>
  <Items>
    <DBInstance>
      <DBInstanceDescription>testforRemarks</DBInstanceDescription>
      <ExpireTime>2014-10-10T16:00:00Z</ExpireTime>
      <DBInstanceId>rds-mjfirvm-jfirv</DBInstanceId>
      <DBInstanceNetType>Internet</DBInstanceNetType>
      <PayType>Prepaid</PayType>
      <DBInstanceStatus>Running</DBInstanceStatus>
      <DBInstanceType>Primary</DBInstanceType>
      <Engine>MySQL</Engine>
      <LockMode>Unlock</LockMode>
      <LockReason></LockReason>
      <RegionId>cn-hangzhou</RegionId>
      <ZoneId>cn-hangzhou-a</ZoneId>
      <MasterInstanceId></MasterInstanceId>
      <GuardDBInstanceId></GuardDBInstanceId>
      <TempDBInstanceId></TempDBInstanceId>
      <ReadOnlyDBInstances>
        <ReadOnlyDBInstanceId></ReadOnlyDBInstanceId>
      </ReadOnlyDBInstances>
    </DBInstance>
    <DBInstance>
      <DBInstanceDescription>testforcreate</DBInstanceDescription>
      <ExpireTime></ExpireTime>
      <DBInstanceId>rds-abqumfa-bqumf</DBInstanceId>
      <DBInstanceNetType>Intranet</DBInstanceNetType>
      <PayType>Postpaid</PayType>
      <DBInstanceStatus>Running</DBInstanceStatus>
      <DBInstanceType>Primary</DBInstanceType>
```



```

< Engine > MySQL </ Engine >
< LockMode > Unlock </ LockMode >
< LockReason ></ LockReason >
< RegionId > cn - hangzhou </ RegionId >
< MasterInst  anceId ></ MasterInst  anceId >
< GuardDBIns  tanceId ></ GuardDBIns  tanceId >
< TempDBInst  anceId ></ TempDBInst  anceId >
< ReadOnlyDB  InstanceId  s >
    < ReadOnlyDB  InstanceId ></ ReadOnlyDB  InstanceId >
</ ReadOnlyDB  InstanceId  s >
</ DBInstance >
</ Items >
< PageNumber > 1 </ PageNumber >
< TotalRecor  dCount > 2 </ TotalRecor  dCount >
< RequestId > 2553A660 - E4EB - 4AF4 - A402 - 8AFF70A491  43 </
  RequestId >
</ DescribeDB  InstancesR  esponse >

```

JSON format

```

{
  " PageNumber ": 1 ,
  " Items ": {
    " DBInstance ": [
      {
        " Engine ": " MySQL ",
        " DBInstance  Type ": " Primary ",
        " DBInstance  Status ": " Running ",
        " DBInstance  Descriptio  n ": " testforRem  arks ",
        " LockMode ": " Unlock ",
        " RegionId ": " cn - hangzhou ",
        " ZoneId ": " cn - hangzhou - a ",
        " DBInstance  Id ": " rdsnjfjrv m  jfirv ",
        " PayType ": " Prepaid ",
        " ExpireTime ": " 2014 - 10 - 10T16 : 00 : 00Z ",
        " DBInstance  NetType ": " Internet ",
        " LockReason ": "",
        " MasterInst  anceId ": "",
        " GuardDBIns  tanceId ": "",
        " TempDBInst  anceId ": "",
        " ReadOnlyDB  InstanceId  s ": {
          " ReadOnlyDB  InstanceId ": []
        }
      },
      {
        " Engine ": " MySQL ",
        " DBInstance  Type ": " Primary ",
        " DBInstance  Status ": " Running ",
        " DBInstance  Descriptio  n ": " testforcre  ate ",
        " LockMode ": " Unlock ",
        " RegionId ": " cn - hangzhou ",
        " DBInstance  Id ": " rdsabqumfa  bqumf ",
        " PayType ": " Postpaid ",
        " ExpireTime ": "",
        " DBInstance  NetType ": " Intranet ",
        " LockReason ": "",
        " MasterInst  anceId ": "",
        " GuardDBIns  tanceId ": "",
        " TempDBInst  anceId ": "",
        " ReadOnlyDB  InstanceId  s ": {
          " ReadOnlyDB  InstanceId ": []
        }
      }
    ]
  }
}

```

```

]
  } ,
  " TotalRecordCount ": 2 ,
  " PageRecordCount ": 2 ,
  " RequestId ": " 2553A660 - E4EB - 4AF4 - A402 - 8AFF70A491 43 "
}

```

2.9 Change the RDS instance type

Description

This API is used to change the type or storage space of a Pay-As-You-Go instance. To use this interface, the following conditions must be met:

- The instance is running.
- There is no running backup task in the instance.
- Either the instance type (DBInstanceClass) or storage space (DBInstanceStorage) parameter must be specified in the request.
- When downgrading the disk space configuration, make sure that the input disk space is no less than 1.1 times the actually space.
- Currently, only common and read-only instances allow configuration changes. Configurations cannot be changed for disaster recovery and temporary instances.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: ModifyDBInstanceSpec .
DBInstanceId	String	Yes	Instance to be upgraded/downgraded
PayType	String	Yes	Billing method. Its value is Postpaid , which means Pay-As-You-Go.
DBInstanceClass	String	No	Instance type. For more information, see Instance type list .

Name	Type	Required or not	Description
DBInstanceStorage	Integer	No	User-defined storage space. The value range is as follows and the value must be an integer multiple of 5: · For MySQL: [5, 2000] · For SQL Server: [10, 2000] · For PostgreSQL and PPAS: [5, 2000]

Return parameters

Name	Type	Description
<Public return parameters>	-	For more information, see Public parameters .

Request example

```
https://rds.aliyuncs.com/?Action=ModifyDBInstanceSpec
&DBInstanceId=rdsaiiabna-iiabn
&PayType=Postpaid
&DBInstanceStorage=10
&<PublicRequestParameters>
```

Response example

XML format

```
<ModifyDBInstanceSpecResponse>
  <RequestId>3C5CFDEE-F774-4DED-89A2-1D76EC63C575
</RequestId>
</ModifyDBInstanceSpecResponse>
```

JSON format

```
"RequestId": "3C5CFDEE-F774-4DED-89A2-1D76EC63C575"
```

2.10 View RDS region and zone information

Description

This API is used to query the selectable RDS regions and zones. Before calling the CreateInstance API, use this interface to view RegionId.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	DescribeRegions

Return parameters

Name	Type	Description
<Public return parameters>	-	For more information, see Public parameters .
Regions	List<RDSRegion>	Returned region list

RDSRegion

Name	Type	Description
RegionId	String	Data center
ZoneId	String	Zone

Request example

```
https://rds.aliyuncs.com/?Action=DescribeRegions
&<PublicRequestParameters>
```

Response example

XML format

```
<DescribeRegionsResponse>
  <Regions>
    <RDSRegion>
      <RegionId>cn-hangzhou</RegionId>
      <ZoneId>cn-hangzhou-a</ZoneId>
    </RDSRegion>
    <RDSRegion>
      <RegionId>cn-hangzhou</RegionId>
      <ZoneId>cn-hangzhou-b</ZoneId>
    </RDSRegion>
  </Regions>
</DescribeRegionsResponse>
```

```

< RegionId > cn - qingdao </ RegionId >
< ZoneId > cn - qingdao - a </ ZoneId >
</ Rdsregion >
< RDSRegion >
< RegionId > cn - beijing </ RegionId >
< ZoneId > cn - beijing - a </ ZoneId >
</ RDSRegion >
< RDSRegion >
< RegionId > cn - hongkong </ RegionId >
< ZoneId > cn - hongkong - a </ ZoneId >
</ RDSRegion >
< RDSRegion >
< RegionId > cn - shenzhen </ RegionId >
< ZoneId > cn - shenzhen - a </ ZoneId >
</ RDSRegion >
</ Regions >
< RequestId > </ RequestId >
</ DescribeRegionsResponse >

```

JSON format

```

{
  "Regions": {
    "RDSRegion": [
      {
        "RegionId": "cn - hangzhou",
        "ZoneId": "cn - hangzhou - a"
      },
      {
        "RegionId": "cn - hangzhou",
        "ZoneId": "cn - hangzhou - b"
      },
      {
        "RegionId": "cn - qingdao",
        "ZoneId": "cn - qingdao - b"
      },
      {
        "RegionId": "cn - beijing",
        "ZoneId": "cn - beijing - a"
      },
      {
        "RegionId": "cn - hongkong",
        "ZoneId": "cn - hongkong - a"
      }
    ]
  },
  "RequestId": "A36D9720 - 7902 - 42A4 - B8B9 - 014A2135E6 C3"
}

```

2.11 Clear RDS instance logs

Description

This API is used to clear all related Binlog logs for a MySQL instance or generate a temporary backup for a SQL Server instance. When the temporary backup is finished, the RDS disk space is reduced.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: PurgeDBInstanceLog.

Name	Type	Required or not	Description
DBInstanceId	String	Yes	Instance with disk space to be reduced

Return parameters

Name	Type	Description
<Public return parameters >	-	For more information, see Public parameters .

Request example

```
https://rds.aliyuncs.com/?Action=PurgeDBInstancesLog
&DBInstanceId=rdsaiiabna-iiabn
&<PublicRequestParameters>
```

Return example

XML format

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

JSON format

```
"RequestId": "65BDA532-28AF-4122-AA39-B382721EEE64"
```

2.12 Upgrade the database version of an RDS instance

Description

This API is used to upgrade the database version of an instance, for example, from MySQL 5.1 to MySQL 5.5.

If a primary instance is attached with a read-only or disaster recovery instance, first upgrade the database version of the read-only or disaster recovery instance. The database version of an instance can be upgraded only if the following conditions are met:

- The instance is running.
- The entered database version must be later than the current database version of the target instance.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: UpgradeDBInstanceEngineVersion
DBInstanceId	String	Yes	Instance to be upgraded/downgraded
EngineVersion	String	Yes	Target database version

Return parameters

Name	Type	Description
<Public return parameters>	-	For more information, see Public parameters .
TaskId	Integer	Task ID.

Request example

```
https://rds.aliyuncs.com/?Action=UpgradeDBInstanceEngineVersion
&DBInstanceId=rdsaiiabna-iiabn
&EngineVersion=5.6
&<PublicRequestParameters>
```

Response example

XML format

```
<UpgradeDBInstanceEngineVersionResponse>
  <RequestId>65BDA532-28AF-4122-AA39-B382721EEE64
</RequestId>
  <TaskId>124378</TaskId>
</UpgradeDBInstanceEngineVersionResponse>
```

JSON format

```
"RequestId": "65BDA532-28AF-4122-AA39-B382721EEE64"
"TaskId": "124378"
```

2.13 Modify the RDS instance maintenance time

Description

This API is used to modify the time for routine instance maintenance. You can set a period of time during which traffic is low. Alibaba Cloud performs routine maintenance within the maintenance period you have set so as to minimize impacts on your services.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: ModifyDBInstanceMaintainTime.
DBInstanceId	String	Yes	Instance ID
MaintainTime	String	Yes	Instance maintenance time. Value range: • 22 : 00Z - 02 : 00Z : 10:00 pm to 02:00 am • 02 : 00Z - 06 : 00Z : 02:00 am to 06:00 am • 06 : 00Z - 10 : 00Z : 6:00 am to 10:00 am • 10 : 00Z - 14 : 00Z : 10:00 am to 02:00 pm • 14 : 00Z - 18 : 00Z : 02:00 pm to 06:00 pm • 18 : 00Z - 22 : 00Z : 06:00 pm to 10:00 pm

Return parameters

Name	Type	Description
<Public return parameters>	-	For more information, see Public parameters .

Request example

```
https://rds.aliyuncs.com/?Action=ModifyDBInstanceMaintainTime
```



```
& DBInstance Id = rdsaiiabna iiabn
& MaintainTime = 22 : 00Z - 02 : 00Z
&< Public Request Parameters >
```

Response example

XML format

```
< ModifyDBInstanceMaintainTimeResponse >
  < RequestId > 65BDA532 - 28AF - 4122 - AA39 - B382721EEE 64
</ RequestId >
</ ModifyDBInstanceMaintainTimeResponse >
```

JSON format

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

2.14 Create a read-only instance

Description

This API is used to create a read-only instance for an RDS instance.

Number of read-only instances:

- If the memory of the master instance is greater than or equal to 64 GB, the master instance can have up to ten read-only instances.
- If the memory of the master instance is less than 64 GB, the master instance can have up to five read-only instances.
- The master instance must be one of the following:
 - MySQL 5.6
 - MySQL 5.7 High-Availability Edition based on local SSDs

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: CreateReadOnlyDBInstance.
RegionId	String	Yes	Region ID, which must be the same as the region of the master instance. You can use the API DescribeRegions to view the region ID list.

Name	Type	Required or not	Description
ZoneId	String	Yes	Zone ID. You can use the API <code>DescribeRegions</code> to view the zone ID list.
DBInstanceId	String	Yes	ID of the master instance.
EngineVersion	String	Yes	Database version, which must be the same as that of the master instance. • 5.6 • 5.7
DBInstanceClass	String	Yes	Instance type. For more information, see Instance type list .
DBInstanceStorage	Integer	Yes	User-defined storage space. Value range: [5, 1000], 5 GB increments. Unit: GB.
DBInstanceDescription	String	No	• Instance description or remarks, no more than 256 bytes. • It cannot begin with <code>http://</code> or <code>https://</code>. It must start with a Chinese character or an English letter. It may contain Chinese and English characters/letters, “_”, “-”, and numbers. The length may be 2-256 characters.
PayType	String	Yes	Value: Postpaid
ClientToken	String	No	Used to guarantee idempotence.
InstanceNetworkType	String	No	If no value is specified, a classic instance is created by default. • VPC: VPC • Classic: classic network
VPCId	String	No	VPC ID.
VSwitchId	String	No	VSwitch ID.
PrivateIpAddress	String	No	IP address of an VPC under VSwitchId. If no value is specified, the system automatically assigns a VPC IP address based on VPCId and VSwitchId.

Return parameters

Name	Type	Description
<Public return parameters>	-	For more information, see Public parameters .
DBInstanceId	String	DB instance ID
OrderId	String	Order ID
ConnectionString	String	Database connection address
Port	String	Port connecting to the database

Request example

```
https://rds.aliyuncs.com/?Action=CreateReadOnlyDBInstance
&RegionId=cn-hangzhou
&ZoneId=cn-hangzhou-b
&DBInstanceId=rdsaiiabna-iiabn
&EngineVersion=5.6
&DBInstanceClass=rds.mysql.small
&DBInstanceStorage=10
&PayType=Postpaid
&ClientToken=ETnLklblzc-zshOTubOCz-iJZNwHLYBQ
&<[PublicRequestParameters]>
```

Return example

XML format

```
<CreateDBInstanceResponse>
  <OrderId>1007893702-30206</OrderId>
  <ConnectionString>rdsaiiabna-iiabn.mysql.rds.aliyuncs.com</ConnectionString>
  <DBInstanceId>rdsaiiabna-iiabn</DBInstanceId>
  <port>3306</port>
  <RequestId>1E43AAE0-BEE8-43DA-860D-EAF2AA0724-DC</RequestId>
</CreateDBInstanceResponse>
```

JSON format

```
{
  "OrderId": "1007893702-30206",
  "ConnectionString": "rdsaiiabna-iiabn.mysql.rds.aliyuncs.com",
  "DBInstanceId": "rdsaiiabna-iiabn",
  "Port": "3306",
  "RequestId": "1E43AAE0-BEE8-43DA-860D-EAF2AA0724-DC"
}
```

3 Read/Write splitting

3.1 ModifyDBInstanceConnectionMode

Description

This API is used to enable or disable the database proxy function. This API is no longer supported.

**Note:**

This API is no longer supported.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: ModifyDBInstanceConnectionMode.
DBInstanceId	String	Yes	Instance ID
ConnectionMode	String	Yes	- Performance : Disable the database proxy function. - Safe : Enable the database proxy function.

Response parameters

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

3.2 Check system-distributed weights

Description

This API is used to check the read weight distributed to each instance when weights are distributed by the system.

This API can only be used for unlocked instances. Otherwise, the operation fails.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Name of the API. Set this parameter to CalculateDBInstanceWeight.
DBInstanceId	String	Yes	Name of the master instance

Return parameters

Name	Type	Description
<Public return parameters>	-	For more information, see Public parameters .
DBInstanceWeights	List	Instance weight calculated by the system in real time

DBInstanceWeight

Name	Type	Description
DBInstanceId	String	Instance ID
DBInstanceType	String	Instance type. Value range: - Master : master instance - Readonly : read-only instance
Weight	String	Weight to be distributed for the instance

3.3 Modify the basic information of read/write splitting

Description

This API is used to change the maximum delay of the read/write splitting link or the weight for each instance.

The following conditions must be met:

- The target instance is running.
- No migration task is ongoing.

- The target instance is not locked.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Set this parameter to ModifyReadWriteSplittingCon
DBInstanceId	String	Yes	Name of a master instance
MaxDelayTime	Int	No	· Delay threshold. Unit: second · Read requests are not routed to read-only instances with a delay greater than the threshold. · If this parameter is not set, the original value is kept.
DistributionType	String	No	Read weight distribution mode. Value range: · Standard : automatic weight distribution based on specifications · Custom : customized weight distribution Either MaxDelayTime or DistributionType must be set.

Name	Type	Required or not	Description
Weight	JSON/String	No	- Read weight distribution. Enter the read weights for the master instance and its read-only instances. - Read weights increase at a step of 100 up to 10,000. - Enter weights in the following format: <pre>{ "Instanceid": "Weight", "Instanceid": "Weight" }</pre> - This parameter must be set when DistributionType is set to Custom. - This parameter is invalid when DistributionType is set to Standard.

Return parameters

Name	Type	Description
<Public return parameters>	-	For more information, see Public parameters .

3.4 Release a read/write splitting address

Description

This API is used to releases a read/write splitting address.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	API of the action, system required parameter. Set this parameter to ReleaseReadWriteSplittingCo
DBInstanceId	String	Yes	ID of a master instance

Response parameters

Name	Type	Description
<Public return parameters>	-	For more information, see Public parameters .

4 Network management

4.1 Change the expiration time of the original classic endpoint

Description

When the instance in the hybrid access mode (both the VPC and classic network endpoints exist in the instance), you can change the expiration time of the original classic endpoint.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	System parameter. Valid value: ModifyDBInstanceNetworkExpri
DBInstanceId	String	Yes	ID of the target RDS instance
ConnectionString	String	Yes	The connection string of the classic network to be extended. There are two types of classic network string: · Classic network string of the current instance · Classic network string of the read/write splitting
ClassicExpiredDays	Integer	Yes	The retention days of the classic network string. Value range: [1-120].

Return parameters

Name	Type	Description
Public return parameters	-	For more information, see Public parameters .

4.2 Modify connection string

Description

This API is used to modify connection string names and ports. Currently, RDS provides intranet and Internet connection strings and allows both types to coexist in a specific access mode.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: ModifyDBInstanceConnections
DBInstanceId	String	Yes	Instance ID
CurrentConnectionString	String	Yes	Current connection string of an instance
ConnectionStringPrefix	String	No	Target connection string
Port	String	No	Target port

Return parameters

Name	Type	Description
<Public Return Parameters>	-	For more information, see Public parameters .

4.3 Modify the network type of an RDS instance

Description

This API is used to switch the network type between VPC and classic network.

**Notice:**

Only instances whose network type is classic network with ConnectionMode set to Safety can be switched to VPC.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: ModifyDBInstanceNetworkType
DBInstanceId	String	Yes	Instance ID
InstanceNetworkType	String	Yes	- VPC : VPC - Classic : classic network
VPCId	String	No	VPC ID
VSwitchId	String	No	VSwitch ID. This input parameter is required if VPCId is not null.
PrivateIpAddress	String	No	IP address of an VPC under VSwitchId. If no value is specified, the system automatically assigns a VPC IP address based on VPCId and VSwitchId.

Name	Type	Required or not	Description
ReadWriteSplittingPrivateIpAddress	String	No	· If the instance has an intranet read/write splitting address, the network type of the address also changes. · When switching to a VPC, you can specify the VPC IP of the read/write splitting link for the instance under VSwitchId. · If no value is specified, the system automatically assigns a VPC IP address based on VPCId and VSwitchId.

Return parameters

Name	Type	Description
<Public Return Parameters>	-	For more information, see Public parameters .

5 Log management

5.1 Query whether SQL audit is enabled

Description

This API is used to query whether SQL collection is enabled for the specified RDS instance.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: DescribeSQLCollectorPolicy.
DBInstanceId	String	Yes	Instance ID

Return parameters

Name	Type	Description
<Public Return Parameters>	-	For more information, see Public parameters .
SQLCollectorStatus	String	- Enable : SQL collection is enabled. - Disabled: SQL collection is disabled.

5.2 View error logs

Description

This API is used to view error logs generated for an instance in a certain time range.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: DescribeErrorLogs .
DBInstanceId	String	Yes	Instance ID
StartTime	String	Yes	Query start time. Format: YYYY-MM-DD' T' HH:mmZ, for example, 2011-05-30T12:10Z.
EndTime	String	Yes	Query end time, which must be later than the query start time. Format : YYYY-MM-DD' T' HH:mmZ, for example, 2011-05-30T20:10Z.
PageSize	Integer	No	Number of records on every page. Values: 30, 50, and 100. Default value: 30.
PageNumber	Integer	No	Page number, which must be greater than 0, but must not exceed the maximum integer value. Default value : 1.

Return parameters

Name	Type	Description
<Public Return Parameters >	-	For more information, see Public parameters .
TotalRecordCount	Integer	Total number of records

Name	Type	Description
PageNumber	Integer	Page number
PageRecordCount	Integer	Number of error logs displayed on the current page
Items	List < ErrorLogs >	-

ErrorLogs parameters

Name	Type	Description
ErrorInfo	String	Error log information
CreateTime	String	Generation time. Format : YYYY-MM-DD' T' HH:mm:ssZ, for example, 2011-05-30 T12:11:4Z.

Request example

```
https://rds.aliyuncs.com/?Action=DescribeErrorLogs
&DBInstanceID=riauvjz6za_jfiq6ba137_0329449201
&StartTime=2011-06-11T15:00Z
&EndTime=2011-06-11T20:00Z
&<PublicRequestParameters>
```

Return example

XML format

```
<DescribeErrorLogsResponse>
  <RequestId>98504E07-BB0E-40FC-B152-E4882615812C</RequestId>
  <TotalRecordCount>1</TotalRecordCount>
  <PageNumber>1</PageNumber>
  <PageRecordCount>1<PageRecordCount>
  <Items>
    <ErrorLog>
      <ErrorInfo>spid52 DBCC TRACEON 3499, server process
ID (SPID) 52. This is an informational message only
; no user action is required</ErrorInfo>
      <CreateTime>2013-06-04T15:00:00</CreateTime>
    </ErrorLog>
  </Items>
</DescribeErrorLogsResponse>
```

JSON format

```
{
  "RequestId": "98504E07-BB0E-40FC-B152-E4882615812C",
  "PageNumber": 1,
```

```

" TotalRecordCount ": 1 ,
" PageRecordCount ": 1
" Items ":
{ " ErrorLog ":
[
{
ErrorInfo : " spid52 DBCC TRACEON 3499 , server process ID
( SPID ) 52 . This is an informational message only ;
no user action is required "
CreateTime : " 2013 - 06 - 04T15 : 00 : 00 "
}
]
}
}
}

```

5.3 View binlogs

Description



Note:

This API applies only to MySQL and PostgreSQL instances that use local SSDs.

This API is used to query the binlog files of an instance, supporting query by page and binlog file download.

- When DownloadLink is NULL , RDS does not provide a download URL.
- When DownloadLink is not NULL , you can use this URL to download the backup file through wget (add double quotes), a browser, or programming. The expiration time for this URL is LinkExpiredTime. Use it before the expiration time. If it has expired, you can see the following error code during the download:

```

<? xml version =" 1 . 0 " encoding =" UTF - 8 " ? >
< Error >
< Code > AccessDenied </ Code >
< Message > Request has expired .</ Message >
< Expires > 2012 - 12 - 25T09 : 47 : 52 . 000Z </ Expires >
< ServerTime > 2012 - 12 - 25T09 : 49 : 00 . 000Z </ ServerTime >
< RequestId > 50D9768CA8 01C2F10200 5C70 </ RequestId >
< HostId > oss - test . aliyun - inc . com </ HostId >
</ Error >

```

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: DescribeBinlogFiles.
DBInstanceId	String	Yes	Instance ID

Name	Type	Required or not	Description
StartTime	String	Yes	Query start time. Format: yyyy-MM-dd' T' HH:mm:ssZ.
EndTime	String	Yes	Query end time, which must be later than the query start time. Format : yyyy-MM-dd' T' HH:mm:ssZ.
PageSize	Integer	No	Number of records on every page. Values: 30, 50, and 100. Default value: 30.
PageNumber	Integer	No	Page number, which must be greater than 0, but must not exceed the maximum integer value. Default value : 1.

Return parameters

Name	Type	Description
<Public Return Parameters >	-	For more information, see Public parameters .
TotalRecordCount	Integer	Total number of binlog files
PageNumber	Integer	Page number
PageRecordCount	Integer	Number of binlog files displayed on the current page
Items	List < BinLogFile >	-

BinLogFile parameters

Name	Type	Description
FileSize	Long	Binlog file size. Unit: byte.
LogBeginTime	String	Start time for binlog file recording
LogEndTime	String	End time for binlog file recording
DownloadLink	String	HTTP-compliant download URL. If this parameter is set to NULL , there is no download URL.
HostInstanceID	String	ID of the instance to which the binlog belongs. This parameter indicates whether the binlog is from the master or slave instance.
LinkExpiredTime	String	URL expiration time, for example, 2011-06-11T15:00:00Z.

Request example

```
https://rds.aliyuncs.com/?Action=DescribeBinlogFiles
&DBInstanceID=riauvjz6za-jfiq6ba137-0329449201
&StartTime=2011-06-11T15:00:00Z
&EndTime=2013-06-05T15:00:00Z
&<PublicRequestParameters>
```

Response example

XML format

```
<DescribeBinlogFilesResponse>
  <RequestId>66816822-CEC1-4C8D-AB26-2530A7D4DC-A5</RequestId>
  <TotalRecordCount>1</TotalRecordCount>
  <PageNumber>1</PageNumber>
  <PageRecordCount>1</PageRecordCount>
  <Items>
    <BinLogFile>
      <FileSize>123</FileSize>
      <LogBeginTime>2013-06-01T15:00:00Z</LogBeginTime>
      <LogEndTime>2013-06-02T18:00:00Z</LogEndTime>
      <DownloadLink>http://rdslog-real.oss.aliyuncs.com/custins47742/hostins46770/mysql-bin.000120.zip?spm=0.0.0.0.eMQKjs&OSSAccessKeyId=c9gzsqpauj
```

```

3duw5whwdv 40hb & Expires = 1384916927 & Signature = 07TMgM3G2J
w4s006yN8n WDgBJPA % 3D </ DownloadLi nk >
  < LinkExpire dTime > 2013 - 06 - 09T18 : 00 : 00Z </ LinkExpire
dTime >
  </ BinLogFile >
</ Items >
</ DescribeBinlogFilesResponse >

```

JSON format

```

{
  "RequestId ":" 66816822 - CEC1 - 4C8D - AB26 - 2530A7D4DC A5 "
  " PageNumber ": 1 ,
  " TotalRecordCount ": 1 ,
  " PageRecordCount ": 1
  " Items ":
  { " BinLogFile ":
  [
  {
    FileSize : " 123 "
    LogBeginTime : " 2013 - 06 - 01T15 : 00 : 00Z "
    LogEndTime : " 2013 - 06 - 02T18 : 00 : 00Z "
    DownloadLink : " http :// rdslog - real . oss . aliyuncs . com /
custins477 42 / hostins467 70 / mysql - bin . 000120 . zip ? spm
= 0 . 0 . 0 . 0 . eMQKjs & OSSAccessKeyId = c9gzsqpauj 3duw5whwdv
40hb & Expires = 1384916927 & Signature = 07TMgM3G2J w4s006yN8n
WDgBJPA % 3D "
    LinkExpire dTime " 2013 - 06 - 09T18 : 00 : 00Z "
  }
  ]
  }
}

```

5.4 ModifySQLCollectorPolicy

Description

This API is used to enable or disable SQL collection for the specified RDS instance.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: ModifySQLCollectorPolicy.
DBInstanceId	String	Yes	Instance ID

Name	Type	Required or not	Description
SQLCollectorStatus	String	Yes	• Enable : SQL collection is enabled. • Disabled : SQL collection is disabled.

Return parameters

Name	Type	Description
<Public Return Parameters >	-	For more information, see Public parameters .

5.5 Query SQL audit logs

Description

This API is used to query SQL audit logs generated for an instance.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: DescribeSQLLogRecords.
DBInstanceId	String	Yes	Instance ID
Database	String	No	Default value: All
User	String	No	Default value: All

Name	Type	Required or not	Description
Form	String	No	File : trigger of audit log file generation. If this parameter is set to File , only public parameters are returned, and you must call DescribeSQLLogFilesinterface to obtain the final download file address. If this parameter is set to Stream , data streams are returned. Default value: Stream
QueryKeywords	String	No	Keywords used for query, which are separated by spaces . Up to 10 keywords can be entered.
StartTime	String	Yes	Query start time. Format: yyyy-MM-dd' T' HH:mm:ssZ .
EndTime	String	Yes	Query end time, which must be later than the query start time. Format :yyyy-MM-dd' T' HH:mm:ssZ.
PageSize	Integer	No	Number of records on every page. Values: 30, 50, and 100. Default value: 30.

Name	Type	Required or not	Description
PageNumber	Integer	No	Page number, which must be greater than 0, but must not exceed the maximum integer value. Default value : 1.

Return parameters

Name	Type	Description
<Public Return Parameters >	-	For more information, see Public parameters .
TotalRecordCount	Integer	Total number of records
PageNumber	Integer	Page number
PageRecordCount	Integer	Number of SQL logs displayed on the current page
Items	List < SQLRecord >	-

SQLRecord parameters

Name	Type	Description
DBName	String	Name of a database
AccountName	String	Name of an account
HostAddress	String	Client IP address
SQLText	String	SQL statement
TotalExecutionTimes	Long	Time consumed. Unit: microsecond.
ReturnRowCounts	Long	Number of returned records
ThreadID	String	Thread ID
ExecuteTime	String	Execution time. Format: yyyy-MM-dd' T' HH:mm:ss Z, for example, 2011-05-30 T12:11:20Z.

Request example

```
https://rds.aliyuncs.com/?Action=DescribeSQLLogRecords
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&StartTime=2011-06-11T15:00:00Z
&EndTime=2013-06-05T15:00:00Z
&<PublicRequestParameters>
```

Response example

XML format

```
<DescribeSQLLogRecordsResponse>
  <RequestId>08A3B71B-FE08-4B03-974F-CC7EA6DB1828</RequestId>
  <TotalRecordCount>1</TotalRecordCount>
  <PageNumber>1</PageNumber>
  <PageRecordCount>1</PageRecordCount>
  <Items>
    <SQLRecord>
      <DBName>test</DBName>
      <AccountName>accounttest</AccountName>
      <HostAddress>192.168.0.121</HostAddress>
      <SQLText>update test.zxb set id = 0 limit 1</SQLText>
      <TotalExecutionTimes>12</TotalExecutionTimes>
      <ReturnRowCounts>34</ReturnRowCounts>
      <ExecuteTime>2011-06-11T15:00:23Z</ExecuteTime>
    </SQLRecord>
  </Items>
</DescribeSQLLogRecordsResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "TotalRecordCounts": 1,
  "ItemsCount": 1,
  "SQLItems": [
    {
      "SQLItem": {
        "DBName": "test",
        "AccountName": "accounttest",
        "HostAddress": "192.168.0.121",
        "SQLText": "update test.zxb set id = 0 limit 1",
        "TotalExecutionTimes": 12,
        "ReturnRowCounts": 34,
        "ExecuteTime": "2011-06-11T15:00:23Z"
      }
    }
  ],
  "RequestId": "08A3B71B-FE08-4B03-974F-CC7EA6DB1828"
```

}

5.6 Query the SQL audit file list

Description

This API is used to query the SQL audit file list.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: DescribeSQLLogFiles.
DBInstanceId	String	Yes	Instance ID

Return parameters

Name	Type	Description
<Public Return Parameters >	-	For more information, see Public parameters .
TotalRecordCount	Integer	Total number of records
PageNumber	Integer	Page number
PageRecordCount	Integer	Number of records displayed on the current page
Items	List < LogFile >	Arrays composed of audit files

LogFile parameters

Name	Type	Description
FileID	Integer	ID of a file
DBInstanceId	String	Instance ID
LogStatus	String	- Success : Archiving completed. - Failed : Archiving failed. - Generating : Archiving is in process.

Name	Type	Description
LogStartTime	String	SQL start time
LogEndTime	String	SQL end time
LogDownloadURL	String	Download URL. This parameter is set to a null string if download cannot be performed for the moment.
LogSize	Long	Log file size. Unit: byte.

6 Backup and recovery

6.1 Create backups

Description

This API is used to create backups. Up to 10 backups can be created for an instance in a single day. The following conditions must be met:

- The instance is active.
- The last backup has been completed.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: CreateBackup.
DBInstanceId	String	Yes	Instance ID
BackupMethod	String	No	• Logical : logical backup • Physical : physical backup • The default value is Physical . Logical backup does not support instances without databases. • SQL Server supports only physical backups •

Name	Type	Required or not	Description
BackupStrategy	String	No	Range of logical backup. • <code>db</code> : single-database backup • <code>instance</code> : instance backup • This parameter is valid only when BackupMethod is <code>Logical</code> .
DBName	String	No	Name of the database for single-database logical backup. This parameter is valid only when BackupMethod is <code>Logical</code> and BackupStrategy is <code>db</code> .
BackupType	String	No	• <code>Auto</code> : determines whether it is a full backup or an incremental backup through automatic calculation. • <code>FullBackup</code> : indicates a full backup. The default value is <code>Auto</code> .

Return parameters

Name	Type	Description
<Public Return Parameters>		For more information, see Public parameters .

Request example

```
https://rds.aliyuncs.com/?Action=CreateBackup
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&<PublicRequestParameters>
```

Response example

XML format:

```
<CreateBackupResponse>
  <RequestId>DA147739-AEAD-4417-9089-65E9B1D824-0D</
  RequestId>
</CreateBackupResponse>
```

JSON format:

```
"RequestId":"DA147739-AEAD-4417-9089-65E9B1D824-0D"
```

6.2 View the backup list

Description

This API is used to query a set of instance backups. The set of backups must be in the success state to restore an instance.

RDS provides backup files for download.

- When DownloadLink is NULL, RDS does not provide a download URL.
- When DownloadLink is not NULL, you can use this URL to download the backup file through wget (add double quotes), a browser, or programming. The expiration time for this URL is specified by LinkExpiredTime. Use it before the expiration time. If it has expired, you can see the following error code during the download:

```
<?xml version="1.0" encoding="UTF-8"?>
<Error>
  <Code>AccessDenied</Code>
  <Message>Request has expired.</Message>
  <Expires>2012-12-25T09:47:52.000Z</Expires>
  <ServerTime>2012-12-25T09:49:00.000Z</ServerTime>
  <RequestId>50D9768CA801C2F102005C70</RequestId>
```

```
< HostId > oss - test . aliyun - inc . com </ HostId >
</ Error >
```

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: DescribeBackups.
DBInstanceId	String	Yes	Instance ID
BackupId	Integer	No	ID of the backup set
BackupStatus	String	No	Backup set status. Value range: - Success : The backup is finished. - Failed : The backup fails.
BackupMode	String	No	Backup mode. Value range: - Automated : common task - Manual : temporary task
StartTime	String	No	Query start time, for example, 2011-06-11T15:00Z.
EndTime	String	No	Query end time, which must be later than the query start time, for example, 2011-06-11T16:00Z.
PageSize	Integer	No	Number of records on every page. Values : 30, 50, and 100. Default value: 30.
PageNumber	Integer	No	Page number, which must be greater than 0 but must not exceed the maximum integer value. Default value: 1.

Return parameters

Name	Type	Description
<Public Return Parameters>		For more information, see Public parameters .
TotalRecordCount	Integer	Total number of records
PageNumber	Integer	Page number

Name	Type	Description
PageRecordCount	Integer	Number of backup sets displayed on the current page
Items	List < Backup >	Arrays composed of backups

Backup parameters

Name	Type	Description
BackupId	Integer	ID of the backup
DBInstanceId	String	Name of an instance
HostInstanceId	String	ID of the instance that generates the backup set. This parameter is used to indicate whether the master or slave instance generates a backup set.
BackupStatus	String	Backup status. Value range: - Success : The backup is finished. - Failed : The backup fails.
BackupStartTime	String	Start time of this backup. Format: YYYY-MM-DD' T' hh:mm:ssZ.
BackupEndTime	String	End time of this backup. Format: YYYYMM-DD' T' hh:mm:ssZ.
BackupType	String	Backup type. Value range: - FullBackup - IncrementalBackup
BackupMode	String	Backup mode. Value range: - Automated - Manual
BackupMethod	String	Backup method. Value range: - Logical - Physical
BackupDownloadURL	String	Download URL. The string is empty if the current backup cannot be downloaded.

Name	Type	Description
BackupIntranetDownloadURL	String	Download URL. The string is empty if the current backup cannot be downloaded.
BackupSize	Long	Data file size. Unit: byte.
StoreStatus	String	Data backup storage status. Value range: • Enabled • Disabled

6.3 Create a temporary instance

Description

This API is used to create a temporary instance based on a backup set or a time point within the last 7 days. When a temporary instance is created, accounts and databases inherit the backup set data. The following conditions must be met:

- The instance is running.
- No migration tasks exist.
- The instance is not locked.
- The current status of the instance backup set is success.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: CreateTempDBInstance.
DBInstanceId	String	Yes	Instance ID
BackupId	Integer	Yes	ID of the backup

Name	Type	Required or not	Description
RestoreTime	String	No	Any time in the past 7 days and more than 30 minutes earlier than the current time can be used as the restoration time. The default time zone is UTC. For example, 2011-06-11T16:00:00Z.

Return parameters

Name	Type	Description
<Public Return Parameters >	-	For more information, see Public parameters .
TempDBInstanceId	String	ID of a sub-instance

Request example

```
https://rds.aliyuncs.com/?Action=CreateTempDBInstance
&BackupId=90262
&DBInstanceId=riauvjz6za_jfiq6ba137_0329449201
&<PublicRequestParameters>
```

Response example

XML format:

```
<CreateTempDBInstanceResponse>
  <RequestId>248DE93F-8647-4B9D-8287-4A4A0FE56A-D5</RequestId>
  <TempDBInstanceId>sub1385954_257106_jun_junzhaasadsd</TempDBInstanceId>
</CreateTempDBInstanceResponse>
```

JSON format:

```
{
  "RequestId": "248DE93F-8647-4B9D-8287-4A4A0FE56A-D5",
  "TempDBInstanceId": "sub1385954_257106_jun_junzhaasadsd"
}
```



```
" TempDBInst  anceId ":" sub1385954  257106_jun  junzhaasad  sd
"
```

6.4 View the backup policy

Description

This API is used to view the backup policy set for the system. The RDS system periodically backs up an instance based on the user-defined system configuration.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: DescribeBackupPolicy.
DBInstance Id	String	String	Instance ID
BackupPolicyMode	String	String	Backup mode - DataBackupPolicy : data backup - LogBackupPolicy : log backup

Return parameters

Name	Type	Description
<Public Return Parameters>	None	For more information, see Public parameters .
BackupRetentionPeriod	String	Retention days of the backup (7 to 730 days). The default value is 7 days.
PreferredBackupTime	String	Backup time, in the format of HH:mmZ- HH:mm Z.

Name	Type	Description
PreferredBackupPeriod	String	Backup period. Value range: - Monday - Tuesday - Wednesday - Thursday - Friday - Saturday - Sunday
BackupLog	String	The default value is <code>Enabled</code> . You can change it to <code>Disabled</code> . - Enabled - Disabled
LogBackupFrequency	String	Log backup interval: - Null: The interval is the same as the data backup interval. This is the default value. - LogInterval: The interval is 30 minutes. This parameter applies only to SQL Server.
LogBackupRetentionPeriod	String	Retention days of the backup (7 to 730 days). The default value is 7 days.
EnableBackupLog	String	Whether to enable log backup: - True : enable - False : disable
LocalLogRetentionHours	String	Retention hours of local log backups
LocalLogRetentionSpace	String	Maximum cycle space usage of local logs

Name	Type	Description
HighSpaceUsageProtection	String	Whether to clear binlogs without any consideration in the case of high disk occupation

6.5 Modify the backup policy

Description

This API is used to modify the backup policy. The RDS system periodically backs up instances according to the user-defined system configuration.

To modify the backup policy, the following conditions must be met:

- The instance is not a read-only policy.
- The instance is running.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: ModifyBackupPolicy.
DBInstanceId	String	Yes	Instance ID
BackupPolicyMode	String	Yes	Backup policy mode. Value range: • DataBackupPolicy : data backup policy • DuplicationPolicy : dumping policy • LogBackupPolicy : log backup policy

Name	Type	Required or not	Description
PreferredBackupTime	String	Yes	Backup time, in the format of HH:mmZ-HH:mm Z. This parameter is mandatory when BackupPolicyMode is set to DataBackupPolicy.
PreferredBackupPeriod	String	Yes	Backup period. Value range: - Monday - Tuesday - Wednesday - Thursday - Friday - Saturday - Sunday If multiple parameters are required, separate them with commas (,). This parameter is mandatory when BackupPolicyMode is set to DataBackupPolicy.
BackupRetentionPeriod	String	No	Retention days of the backup (7 to 730 days). The default value is 7 days. This parameter is mandatory when BackupPolicyMode is set to LogBackupPolicy.

Name	Type	Required or not	Description
BackupLog	String	No	Whether log backup is available • Enable : available • Disabled : unavailable The default value is Enable . This parameter is mandatory when BackupPolicyMode is set to DataBackupPolicy .
EnableBackupLog	String	No	Whether to enable log backup: • True : enable • False : disable This parameter is mandatory when BackupPolicyMode is set to LogBackupPolicy .
LogBackupFrequency	String	No	Log backup interval: • Null: The interval is the same as the data backup interval. This is the default value. • LogInterval: The interval is 30 minutes. This parameter applies only to SQL Server.

Name	Type	Required or not	Description
LocalLogRetentionHours	String	No	Retention hours of local log backups Value range: 0 to 7x24. 0 indicates that local log backups are not reserved. The default value is 18. This parameter is mandatory when BackupPolicyMode is set to LogBackupPolicy.
LocalLogRetentionSpace	String	No	Maximum cycle space usage of local logs Value range: 0 to 50. This parameter indicates cycle space, and the default value is 30. This parameter is mandatory when BackupPolicyMode is set to LogBackupPolicy.

Name	Type	Required or not	Description
HighSpaceUsageProtection	String	No	When the instance space usage is higher than or equal to 90% or the residual space is smaller than 5 GB, whether to clear binlogs without any consideration in the case of high disk occupation: - Disable : clear - Enable : not clear The default value is Enable . This parameter is mandatory when BackupPolicyMode is set to LogBackupPolicy .
Duplication	String	No	Whether to enable backup files to be dumped to OSS: - Disable : disable - Enable : enable The default value is Disable .

Name	Type	Required or not	Description
DuplicationContent	String	No	Data backup or log backup: - DATA : data backup - LOG : log backup - DATA & LOG : both data and log backup This parameter is mandatory when Duplication is set to Enable .
LogBackupRetentionPeriod	String	No	Log backup retention days (it can be 7 to 730 days, and cannot be greater than the data backup retention days). When you enable log backup, you can set the number of days that the log backup files are retained. Currently , only MySQL, PostgreSQL, and PPAS instances support this parameter.

Return parameters

Name	Type	Description
<Public Return Parameters>	-	For more information, see Public parameters .

Request example

```
https://rds.aliyuncs.com/?Action=ModifyBackupPolicy
```



```
& DBInstance Id = riauvjz6za jfiq6ba137 0329449201
& PreferredBackupTime = 00 : 00Z - 01 : 00Z
& PreferredBackupPeriod = Monday
</ Public Request Parameters >
```

Return example

XML format

```
< CreateBackupResponse >
  < RequestId > DA147739 - AEAD - 4417 - 9089 - 65E9B1D824 0D
</ RequestId >
</ CreateBackupResponse >
```

JSON format

```
{
  "RequestId": "DA147739 - AEAD - 4417 - 9089 - 65E9B1D824 0D"
}
```

6.6 Recover a backup set to an instance

Description

This API is used to restore the backup set to an instance by overwriting the instance.

The following conditions must be met:

- The instance is running.
- No migration tasks exist.
- The instance is not locked.
- The current status of the instance backup set is success.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: RestoreDBInstance.
DBInstanceId	String	Yes	Instance ID
BackupId	Integer	Yes	ID of the backup set

Return parameters

Name	Type	Description
<Public Return Parameters>	-	For more information, see Public parameters .

Request example

```
https://rds.aliyuncs.com/?Action=RestoreDBInstance
&BackupId=103916160
&DBInstanceId=rds91e395t-otd54461k3
&<PublicRequestParameters>
```

Response example

XML format

```
<RestoreDBInstanceResponse>
  <RequestId>37441409-FFD1-40AA-8EC5-9ECF5E2F7C29</
  RequestId>
</RestoreDBInstanceResponse>
```

JSON format

```
{"RequestId":"37441409-FFD1-40AA-8EC5-9ECF5E2F7C29"}
```

6.7 DescribeBackupTasks

This API is used to show the backup task list.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	Required parameter. Value: DescribeBackupTasks
DBInstanceId	String	Yes	Instance ID.
BackupJobId	String	No	Backup task ID.

Response parameters

Parameter	Type	Description
<Common response parameters>	String	See Public parameters .

Parameter	Type	Description
Items	List	List of backup tasks.

Items

Parameter	Type	Description
BackupStatus	String	Backup task status: - NoStart - Preparing - Waiting - Uploading - Checking - Finished
BackupJobId	String	Backup task ID.

6.8 View log files

This API is used to query log files of RDS instances and download links of the files.



Note:

It applies only to RDS for SQL Server instances.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: DescribeLogBackupFiles
DBInstanceId	String	Yes	Instance ID
StartTime	String	Yes	Start time of the query. Format: yyyy-mm-dd' T' hh:mm:ssZ Example: 2018-10-31T08:40Z
EndTime	String	Yes	End time of the query. Format: yyyy-mm-dd' T' hh:mm:ssZ Example: 2018-10-31T08:40Z It must be later than the start time of the query.

Name	Type	Required or not	Description
PageSize	Integer	No	Maximum number of log files displayed on each page. • 30 • 50 • 100 Default value: 30
PageNumber	Integer	No	Page number. It must be greater than 0 and cannot exceed the largest value of the Integer data type. Default value: 1

Return parameters

Name	Type	Required
<Common Return Parameters>	String	For more information, see Public parameters .
TotalRecordCount	Integer	Total number of log files
PageNumber	Integer	Page number
PageRecordCount	Integer	Number of log files displayed on a page
Items	List<LogBackupFiles>	Log file list

LogBackupFiles parameters

Name	Type	Required
FileSize	Long	Log file size. Unit: byte
LogBeginTime	String	Start time of a log file
LogEndTime	String	End time of a log file
DownloadLink	String	HTTP download link NULL indicates that no download link is provided.

Name	Type	Required
LinkExpirationTime	String	Link expiration time. Example: 2011-06-11T15:00:00Z If you attempt to download a log file after its download link has expired, an error message similar to the following is displayed: <pre><? xml version =" 1 . 0 " encoding =" UTF - 8 " ? > < Error > < Code > AccessDenied </ Code > < Message > Request has expired . </ Message > < Expires > 2012 - 12 - 25T09 : 47 : 52 . 000Z </ Expires > < ServerTime > 2012 - 12 - 25T09 : 49 : 00 . 000Z </ ServerTime > < RequestId > 50D9768CA8 01C2F10200 5C70 </ RequestId > < HostId > oss - test . aliyun - inc . com </ HostId > </ Error ></pre>

7 Migrate SQL Server to the cloud

7.1 Create a task of migrating data to RDS

Description

This API is used to restore backup files in an OSS instance to an RDS instance. It has the following constraints:

- This API is applicable only to SQL Server 2008 R2 instances.
- The source file must be the full backup file of the source database.

Request parameters

Parameter	Type	Required or not	Description
Action	String	Yes	API of the action, system required parameter. Set this parameter to <code>CreateMigrateTask</code> .
DBInstanceId	String	Yes	Instance ID
DBName	String	Yes	Database name
BackupMode	String	Yes	Task type. Currently, this parameter can only be set to <code>FULL</code> . Value range: • <code>FULL</code> : One-time full backup file migration • <code>DIFF</code> : One-time incremental backup file migration • <code>LOG</code> : Repeated incremental backup file migration

Parameter	Type	Required or not	Description
IsOnlineDB	String	Yes	Whether to bring the restored database online for user access. Value range: True and False . The default value is True . Currently, this parameter is invariably set to True .
OSSUrls	String	Yes	Sharing URL of the backup file in an OSS instance. The URL must be encoded. If multiple URLs are available for a backup file, separate them with . Currently, only one URL is allowed.

Response parameters

Parameter	Type	Description
<Public response parameters>	-	For more information, see Public parameters .
RequestId	String	Request ID
DBInstanceId	String	Instance ID
DBName	String	Database name
TaskId	String	Task ID
MigrateTaskId	String	ID of the migration task

Parameter	Type	Description
BackupMode	String	Task type. Currently, this parameter can only be set to <code>FULL</code> . Value range: <code>FULL</code> : One-time full backup file migration <code>DIFF</code> : One-time incremental backup file migration <code>LOG</code> : Multiple migrations of incremental backup files

7.2 Obtain the migration task list

Description

This API is used to obtain the task records of migrating data to an RDS instance within a period of time. It has the following constraints:

- Currently, only SQL Server 2008 R2 instances are supported.
- The source file must be the full backup file of the source database.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Name of the interface. Value: <code>DescribeMigrateTasks</code> .
DBInstanceId	String	Yes	Name of an RDS instance, for example, <code>rm-xetesting</code> .
StartTime	String	No	Start time, for example, <code>2017-10-20T01:00Z</code> .

Name	Type	Required or not	Description
EndTime	String	No	End time, for example, 2017-10-25T01:00Z. It must be later than the start time.
PageSize	Integer	No	Number of records per page. Optional values: 30, 50, and 100. The default value is 30.
PageNumber	Integer	No	Number of the page containing the expected data.

Response parameters

Parameter	Type	Description
DBInstanceId	String	Instance ID
PageRecordCount	Integer	Number of data file import records
PageNumber	Integer	Number of the page containing the expected data
TotalRecordCount	Integer	Total number of matching records
Items	List	Data set

Parameters for Items

Parameter	Type	Description
MigrateTaskId	String	ID of the migration task
DBName	String	Database name
CreateTime	String	Creation time of the migration task, in the format of YYYY-MM-DD'TT'HH:mm:ssZ, for example, 2017-05-30T12:11:4Z.

Parameter	Type	Description
EndTime	String	End time of the migration task, in the format of <code>YYYY-MM-DD'T'HH:mm:ssZ</code> , for example, 2017-05-30 T12:11:4Z .
IsDBReplaced	String	Whether the migration overwrites existing data. Currently, only the value <code>True</code> can be returned. Value range: <code>False</code> : Existing data is not overwritten. <code>True</code> : Existing data is overwritten.
Status	String	Migration status. Value range: <code>NoStart</code> : Migration not started <code>Running</code> : Migration in progress <code>Success</code> : Migration succeeded <code>Failed</code> : Migration failed <code>Waiting</code> : Waiting to migrate incremental backup files

Parameter	Type	Description
BackupMode	String	Data migration task type. Currently, only the value <code>FULL</code> can be returned. Value range: • <code>FULL</code> : One-time full backup file migration • <code>DIFF</code> : One-time incremental backup file migration • <code>LOG</code> : Multiple migration tasks of incremental backup files
Description	String	Description about the migration task

7.3 Check the file details about the task of migrating data to RDS

Description

This API is used to query details about cloud data migration tasks, including details about specific migrated files. It has the following constraints:

- This API is applicable only to SQL Server 2008 R2 instances.
- The source file must be the full backup file of the source database.

Request parameters

Parameter	Type	Required or not	Description
Action	String	Yes	Name of the API. Value: <code>DescribeOssDownloads</code> .
DBInstanceId	String	Yes	Instance ID
MigrateTaskId	String	Yes	ID of the migration task

Response parameters

Parameter	Type	Description
DBInstanceId	String	Instance ID
MigrateTaskId	String	ID of the migration task
Items	List	Import records

Parameters for Items

Parameter	Type	Description
FileName	String	Name of the backup file stored in an OSS instance
CreateTime	String	Creation time of the backup file in the download list
BackupMode	String	Data migration task type. Currently, only the value <code>FULL</code> can be returned. Value range: • <code>FULL</code> : One-time full backup file migration • <code>DIFF</code> : One-time incremental backup file migration • <code>LOG</code> : Multiple migrations of incremental backup files
FileSize	String	Size of the backup file. Unit: MB.

Parameter	Type	Description
Status	String	File status. Value range: - NoStart : Download not started - Downloadin g : Download in progress - Finished : Download completed - DownloadFa iled : Download failed - VerifyFail ed : MD5 verification failed - Deleted : Already deleted - DeleteFail ed : Deletion failed - CheckSucce ss : Check succeeded - CheckFaile d : Check failed - Restoring : Restore in progress - Restored : Restore succeeded - RestoreFai led : Restore failed
IsAvailable	String	Availability status. Value range: - False : Unavailable - True : Available
Description	String	File description

8 Tag management

8.1 Bind tags

Description

This API is used to bind the existing or newly created tags to instances. The limitations are as follows:

- Each tag is composed of a TagKey and a TagValue. The TagKey cannot be blank, while the TagValue can be blank.
- The TagKey and TagValue values cannot start with aliyun.
- The TagKey and TagValue are not case sensitive.
- The maximum length of TagKey is 64 characters and the maximum length of TagValue is 128 characters.
- Each instance can be bound to a maximum of 10 tags. Each tag bound to the same instance must have a unique TagKey. If tags with duplicate TagKeys are bound to the same instance, the tag bound last overwrites the existing tag.

Request Parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: AddTagsToResource.
RegionId	String	Yes	Region where the instance is located. For example, cn-hangzhou.
DBInstanceId	String	Yes	• Instance ID. Up to 30 IDs can be entered at a time. • Format: instance1,instance2,instance3 •

Name	Type	Required or not	Description
Tags	JSON string	Yes	- The list of tags to be bound, including the TagKeys and TagValues. - Up to 5 pairs of value can be entered at a time. - The TagKey cannot be blank, but the TagValue can. - Format sample: { "key1" : "value1" , "key2" : " " }.

Return Parameters

Name	Type	Description
<Public Return Parameters>	None	For more information, see Public parameters .

8.2 Query tags

Description

This API is used to query information about tags bound to RDS instances under the current account. The limitations are as follows:

- If the user enters an instance ID, all tags bound to this instance are queried and the other filter conditions are not valid.
- When you query tags, if only TagKey is provided and no TagValue is provided, results for all tags matching the TagKey condition are returned. If both TagKey and TagValue are provided, only results for tags matching both conditions are returned.

Request Parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: DescribeTags.
RegionId	String	Yes	Region where the instance is located. For example, cn-hangzhou.
DBInstanceId	String	No	Instance ID. If this parameter is entered, all other filter conditions are invalid.

Name	Type	Required or not	Description
Tags	Json String	No	• The list of tags to be queried, including the TagKey and TagValue. • The TagKey cannot be blank, but the TagValue can. • Format sample: { "key1" : "value1" }.

Return Parameters

Name	Type	Description
<Public Return Parameters>	None	For more information, see Public parameters .
Items	List<TagInfos>	Arrays composed of tag information

TagInfos

Name	Type	Description
TagKey	String	TagKey
TagValue	String	TagValue
DBInstanceIds	List<DBInstanceId>	IDs of instances bound to this tag

DBInstanceIds

Name	Type	Description
DBInstanceId	String	Instance ID

8.3 Unbind tags

Description

This API is used to unbind tags bound to an instance. The limitations are as follows:

- Up to 10 tags can be unbound at one time.
- If a tag is unbound from all instances, it is removed automatically.
- When you unbind tags, if only TagKey is provided and no TagValue is provided, tags matching TagKey criteria are unbound.

Request Parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: RemoveTagsFromResource.
RegionId	String	Yes	Region where the instance is located. For example, cn-hangzhou.
DBInstanceId	String	Yes	Instance ID
Tags	Json String	Yes	• The tags to be unbound, including the TagKey and TagValue. • The TagKey cannot be blank, but the TagValue can. • Format sample: { "key1" : "value1" }.

Return Parameters

Name	Type	Description
<Public Return Parameters>	-	For more information, see Public parameters .

9 Appendix

9.1 Client error code table

Public errors

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

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

Specific errors

Error code	Description	HTTP status code
InvalidRegionId.NotFound	The DBInstanceId provided does not exist in our records.	404
InvalidSecurityIPList.Duplicate	The Security IP address is not in the available range or occupied.	400
InvalidSecurityIPListLength.Malformed	The security IP address is beyond the available range or is already used.	400
InvalidEngineVersionInRegion.NotAvailable	The EngineVersion in the Region is not available.	403
InvalidEngineInRegion.NotAvailable	The Engine in the Region is not available.	403
InvalidDBInstanceClassInRegion.NotAvailable	The DBInstanceClass in the Region is not available.	403
OperationDenied	The resource is out of usage.	403
RegionUnauthorized	There is no authority to create instance in the specified region.	403
QuotaExceeded.CreateInstance	The quota of create instance exceeds.	403
InvalidDBInstanceId.NotFound	The specified DBInstanceId does not exist.	404
MissingParameter	The input parameters "DBInstanceClass" and "DBInstanceStorage" all blank or no change.	400
OperationDenied.DBInstanceType	The operation is not permitted due to type of instance.	400
OperationDenied.DBInstanceStorageReduce	The operation is not permitted due to reduce storage.	403

Error code	Description	HTTP status code
OperationDenied.DBInstanceStatus	The operation is not permitted due to instance status.	403
DependencyViolation	The operation is not permitted due to instance mount read only or guard instance.	403
InvalidConnectionStringPrefix.Duplicate	The connection string is not in the available range or occupied.	400
QuotaExceeded.SwitchTime	The quota of switch time exceed.	400
OperationDenied.LockMode	The operation is not permitted due to lock of instance.	403
InvalidSecurityIps.Duplicate	The quota of security IP exceeds.	400
OperationDenied.CurrentEngineVersion	The operation is not permitted due to specified current version .	400
OperationDenied.ReadOnlyDBInstanceLower	The operation is not permitted due to higher read only instance version	403
OperationDenied.GuardDBInstanceLower	The operation is not permitted due to higher guard instance version .	403
OperationDenied.MasterDBInstanceState	The status of the specified master instance does not support this operation.	403
QuotaExceeded.DBName	The quota of db exceeds.	400
InvalidDBName.Duplicate	The specified DB name is invalid or already exists.	400
InvalidParameter.Keyword	The specified DBName is a reserved keyword.	400
OperationDenied.DBStatus	The status of the database does not support this operation.	403

Error code	Description	HTTP status code
OperationDenied.DBInstanceEngine	The operation is not permitted due to engine of instance.	403
FTPServiceUnavailable	The service is unavailable now; wait several minutes and try again.	403
QuotaExceeded.Upload	The quota of file exceeds.	403
InvalidFileName.NotCompleted	The specified "FileName" is not completed .	404
InvalidFileName.NotAvailable	The specified "FileName" is not Available .	404
QuotaExceeded.FileSize	The quota of file size exceeds.	403
QuotaExceeded.DBInstanceStorage	The quota of instance storage exceeds.	403
InvalidDBInfo.Malformed	The specified parameter "DBInfo" is not valid or db not exist.	400
OperationDenied.Region	The operation is not permitted due to different region.	403
OperationDenied.Engine	The operation is not permitted due to different engine.	403
OperationDenied.DBInstanceId	The operation is not permitted due to DBInstanceId and SourceDBInstanceId is same.	403
InvalidTaskId.NotFound	The ImportId provided does not exist in our records.	400
OperationDenied.IncorrectTaskStatus	The operation is not permitted due to status of import.	403
InvalidAccountName.keyword	The specified AccountName is a reserved keyword.	400

Error code	Description	HTTP status code
InvalidAccountName.Duplicate	The specified AccountName already exists.	400
QuotaExceeded.AccountName	The quota of account exceeds.	403
OperationDenied.AccountStatus	The status of the account does not support this operation.	403
InvalidDBName.NotFound	The specified ImageId does not exist.	404
OperationDenied.AccountType	The operation is not permitted due to type of account.	403
OperationDenied.BackupJobExists	You cannot perform this operation; a backup job exists.	403
OperationDenied.NoDatabase	The operation is not permitted due to no database.	403
InvalidStartTimeAndEndTime.Malformed	The EndTime must be later than or equal to the StartTime.	400
OperationDenied.BackupJobExists	You cannot perform this operation; a backup job exists.	403
InvalidBackupId.NotFound	The BackupId provided does not exist in our records.	404
OperationDenied.NotFoundBackup	The operation is not permitted due to no backup.	403
OperationDenied.BackupStatus	The operation is not permitted due to type of backup.	403
OperationDenied.BackupMethod	The operation is not permitted method of backup.	403

Error code	Description	HTTP status code
OperationDenied.TempDBInstanceExists	You cannot perform this operation; a temp instance exists.	403
Forbidden.Authentication	The operation is forbidden by Aliyun Realname Authentication System.	403
IncorrectDBInstanceConnType	Current DB instance conn type does not support this operation.	404
IncorrectVpcId.Mismatch	The specified parameter "VpcId" is not valid.	400
IntranetNetTypeNotExists	Current DB instance net type does not support this operation.	404
InvalidDBInstanceName.NotFound	The DBInstanceId provided does not exist in our records.	403
InvalidConnectionMode.ValueNotSupported	The specified parameter "ConnectionMode" is not valid.	400
InvalidConnectionString.Duplicate Specified	connection string already exists in the Aliyun RDS.	403
InvalidConnectionString.Duplicate Specified	connection string or port want to be modified is the same with current net type .	400
InvalidConnectionStringPrefix.Duplicated	The specified connection string already exists.	403
InvalidCurrentConnectionString.NotFound	Specified current connection string doesn't exist.	400
InvalidDBInstanceId.NotFound	The specified DBInstance Id does not exist.	400
InvalidDBInstanceId.QuotaExceeded	The quota of instance id exceeds.	400
InvalidDBInstanceNetType.NotFound	The Specified DB instance net type is not found.	404

Error code	Description	HTTP status code
InvalidDBInstanceNetType.ValueNotSupport	The specified parameter "DBInstanceNetType" is not valid.	400
InvalidDBInstanceType.ValueNotSupport	The specified parameter "DBInstanceType" is not valid.	400
InvalidEngineVersion.Malformed	The specified parameter "EngineVersion" is not valid.	400
InvalidInstanceNetworkType.ValueNotSupported	The specified parameter "InstanceNetworkType" is not valid.	400
InvalidParameter	The specified parameter "dbInstanceId" is not valid.	400
InvalidPort.Malformed	Specified port is not valid.	400
InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	400
InvalidPrivateIpAddress.Mismatch	Specified private IP address is not in the CIDR block of virtual switch.	400
InvalidVPCId.NotFound	The specified connection string or port does not match the current network type.	400
InvalidVSwitchId.Mismatch	Specified instance and virtual switch are not in the same zone.	400
InvalidVSwitchId.NotFound	Specified virtual switch is not found in specified VPC.	400
NetTypeExists	Specified net type already existed.	400
NetTypeExists	Specified public net type already existed.	403
OperationDenied.DBInstanceNetType	The network type of the specified instance does not support this operation.	403

Error code	Description	HTTP status code
OperationDenied.DBInstanceStatus	The specified connection string or port does not match the current network type.	403
OperationDenied.DBInstanceType	The operation is not permitted due to type of instance.	403
OperationDenied.LockMode	The instance is locked.	403
OperationDenied.Switch	Specified instance cannot be switched.	400
OperationDenied.Switch	Specified instance cannot be switched to VPC.	403
OperationDenied.SwitchToVPC	Specified instance cannot be switched to VPC.	403
OperationDenied	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	403
OperationDenied	The vpc cloudinstanceIp is use, please check params.	406
OperationDenied	The vpc service is error, please check params.	400
PARAMETER_ERROR	The vpc request parameter may not be null.	406
PARAMETER_MUST_NOT_NULL	The parameter must not be null.	406
PublicConnectionExists	PublicConnection exists.	403
bpcIzNoNotEqualsRdsMultIzNo	Specified vpc IzNo not equal rds IzNo.	400

9.2 Server error code table

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

9.3 Instance status table

Status	Description
Creating	An instance is being created.
Running	An instance is active.
Deleting	An instance is being deleted.
Rebooting	An instance is being rebooted.
DBInstanceClassChanging	An instance is being upgraded or downgraded.
TRANSING	Migration is underway.
EngineVersionUpgrading	Version migration is being performed.
TransingToOthers	Data is being migrated to other RDS instances.
GuardDBInstanceCreating	Production disaster preparedness example.
A disaster recovery instance is being created	Backup recovery is being performed.
Importing	Data is being imported.
ImportingFromOthers	Data is being imported from other RDS instances.
DBInstanceNetTypeChanging	Switching between intranet and Internet.
GuardSwitching	Switching disaster recovery.
INS_CLONING	An instance is being cloned.

9.4 Performance parameter table

RDS for MySQL

API parameter	Meaning
MySQL_NetworkTraffic	Average inbound traffic to a MySQL instance per second and average outbound traffic from a MySQL instance per second. Unit: KB.
MySQL_QPSTPS	Average number of SQL statement execution times per second and average number of transactions per second
MySQL_Sessions	Number of currently active connections and total number of current connections
MySQL_InnoDBBufferRatio	Read hit rate of the InnoDB buffer pool, utilization rate of the InnoDB buffer pool , and percentage of dirty data blocks in the InnoDB buffer pool
MySQL_InnoDBDataReadWriten	InnoDB average volume of data reads per second and InnoDB average volume of data writes per second. Unit: KB
MySQL_InnoDBLogRequests	Average times of reading data from the InnoDB buffer pool per second and average times of writing data to the InnoDB buffer pool per second
MySQL_InnoDBLogWrites	Average number of log write requests per second, Average number of physical writes performed on log files per second , and average number of fsync() writes completed on log files per second
MySQL_TempDiskTableCreates	Number of temporary tables automatically created in the hard drive during MySQL statement execution
MySQL_MyISAMKeyBufferRatio	Average Key Buffer utilization rate of MyISAM per second, average Key Buffer read hit rate of MyISAM per second, and average Key Buffer write hit rate of MyISAM per second

API parameter	Meaning
MySQL_MyISAMKeyReadWrites	Average times of reading data from the buffer pool by MyISAM per second , average times of writing data to the buffer pool by MyISAM per second, average times of reading data from the hard disk by MyISAM per second, and average times of writing data to the hard disk by MyISAM per second
MySQL_COMDML	Average times of DELETE statement execution per second, average times of INSERT statement execution per second, average times of INSERT_SELECT statement execution per second, average times of REPLACE statement execution per second, average times of REPLACE_SELECT statement execution per second, average times of SELECT statement execution per second, and average times of UPDATE statement execution per second
MySQL_RowDML	Average number of rows read from the InnoDB table per second, average number of rows updated in the InnoDB table per second, average number of rows deleted from the InnoDB table per second, average number of rows inserted into the InnoDB table per second, and average number of physical writes performed on log files per second
MySQL_MemCpuUsage	CPU usage by a MySQL instance (expressed as a percentage of the operating system' s CPU) and memory usage by a MySQL instance (expressed as a percentage of the operating system' s memory)
MySQL_IOPS	IOPS (I/O requests per second) of a MySQL instance

API parameter	Meaning
MySQL_DetailedSpaceUsage	Space usage by a MySQL instance: total space usage by the ins_size instance + data_size data space + log_size log space + tmp_size temporary space + other_size system space
MySQL_CPS	Number of connections per second
slavestat	Read-only instance delay

RDS for SQL Server

API Parameter	Meaning
SQLServer_Transactions	Average number of transactions per second
SQLServer_Sessions	Total number of current connections
SQLServer_BufferHit	Buffer hit rate
SQLServer_FullScans	Average times of full table scan per second
SQLServer_SQLCompilations	Number of SQL compilations per second
SQLServer_CheckPoint	Number of times checkpoints are written to pages per second
SQLServer_Logins	Login times per second
SQLServer_LockTimeout	Lock timeout times per second
SQLServer_Deadlock	Deadlock times per second
SQLServer_LockWaits	Number of lock waits per second
SQLServer_NetworkTraffic	Average inbound/outbound traffic to/from a MySQL instance per second. Unit: KB
SQLServer_QPS	Average times of SQL statement execution per second
SQLServer_InstanceCPUUsage	CPU usage by a SQL Server instance (expressed as a percentage of the operating system's CPU)
SQLServer_IOPS	IOPS (I/O request per second) of a MS SQL instance
SQLServer_SpaceUsage	Space usage by a SQL Server instance

9.5 Forbidden keywords table

RDS for MySQL

Parameter field	Field keyword description
DBName/AccountName	admin, aurora, replicator, xtrabak, root, mysql, test, eagleye, information_schema, guest, add, analyze, asc, between, blob, call, change, check, condition, continue, cross, current_timestamp, database, day_microsecond, dec, default, desc, distinct, double, each, enclosed, exit, fetch, float8, foreign, goto, having, hour_minute, ignore, infile, insensitive, int1, int4, interval, iterate, keys, leading, like, lines, localtimestamp, longblob, low_priority, mediumint, minute_microsecond, modifies, no_write_to_binlog, on, optionally, out, precision, purge, read, references, rename, require, revoke, schema, select, set, spatial, sql_exception, sql_big_result, ssl, table, tinyblob, to, true, unique, update, using, utc_timestamp, varchar, when, with, xor, all, and, asensitive, bigint, both, cascade, char, collate, connection, convert, current_date, current_user, databases, day_minute, decimal, delayed, describe, distinctrow, drop, else, escaped, explain, float, for, from, grant, high_priority, hour_second, in, inner, insert, int2, int8, into, join, kill, leave, limit, load, lock, longtext, match, mediumtext, minute_second, natural, null, optimize, or, outer, primary, raid0, reads, regexp, repeat, restrict, right, schemas, sensitive, show, specific, sqlstate, sql_calc_found_rows, starting, terminated, tinyint, trailing, undo, unlock, usage, utc_date, values, varcharacter, where, write, year_month, alter, as, before, binary, by, case, character, column, constraint, create, current_time, cursor, day_hour, day_second, declare, delete, deterministic, div, dual, elseif, exists, false, float4, force, fulltext, group, hour_microsecond, if, index, inout, int, int3, integer, is, key, label, left, linear, localtime, long

RDS for SQL Server

Parameter field	Field keyword description
DBName/AccountName	root, admin, eagleye, master, aurora, sa, sysadmin, administrator, mssql, public, securityadmin, serveradmin, setupadmin, processadmin, diskadmin, dbcreator, bulkadmin, tempdb, msdb, model, distribution, mssqlsystemresource, guest, add, except, percent, all, exec, plan, alter, execute, precision, and, exists, primary, any, exit, print, as, fetch, proc, asc, file, procedure, authorization, fillfactor, public, backup, for, raiserror, begin, foreign, read, between, freetext, readtext, break, freetexttable, reconfigure, browse, from, references, bulk, full, replication, by, function, restore, cascade, goto, restrict, case, grant, return, check, group, revoke, checkpoint, having, right, close, holdlock, rollback, clustered, identity, rowcount, coalesce, identity_insert, rowguidcol, collate, identitycol, rule, column, if, save, commit, in, schema, compute, index, select, constraint, inner, session_user, contains, insert, set, containstable, intersect, setuser, continue, into, shutdown, convert, is, some, create, join, statistics, cross, key, system_user, current, kill, table, current_date, left, textsize, current_time, like, then, current_timestamp, lineno, to, current_user, load, top, cursor, national, tran, database, nocheck, transaction, dbcc, nonclustered, trigger, deallocate, not, truncate, declare, null, tsequal, default, nullif, union, delete, of, unique, deny, off, update, desc, offsets, updatetext, disk, on, use, distinct, open, user, distributed, opendatasource, values, double, openquery, varying, drop, openrowset, view, dummy, openxml, waitfor, dump, option, when, else, or, where, end, order, while, errlvl, outer, with, escape, over, writetext, galaxy

10 API overview

RDS instance management

API	Description
Create an RDS instance	Create an RDS instance.
Delete an RDS instance	Release an RDS instance.
Restart an RDS instance	Restart an RDS instance.
View instance attributes	View the details of an RDS instance.
View the RDS instance list	View an RDS instance table.
Change the RDS instance type	Change the type of an RDS instance.
Enable or disable the database proxy	Change the RDS instance access mode.
View RDS region and zone information	Query the RDS region and zone information.
View RDS zone information and data replication statuses	Query the RDS zone information and data replication status.
Migrate the RDS instance zone	Migrate the zone of an RDS instance.
Clear RDS instance logs	Clear RDS instance logs.
Upgrade the database version of an RDS instance	Upgrade the RDS instance version.
Modify the description of an RDS instance	Modify the RDS instance remarks.
Modify the RDS instance maintenance time	Change the RDS instance maintenance time.
Modify the instance data replication mode and high-availability switching rules	Modify the data replication mode and high-availability policy for an instance.
Switch between the master and slave databases of an RDS instance	Switch between the master and slave RDS instances.
Create a read-only instance	Create a read-only RDS instance.

RDS database management

API	Description
Create a database	Create a database.

API	Description
Delete a database	Delete a database.
View the database list	View the database list.
Modify database remarks	Modify database remarks.
Copy a database for SQL Server 2008 R2	Copy a database in SQL Server 2008 R2.
Copy databases between instances	Copy databases between SQL Server 2012 and SQL Server 2016 instances.

RDS account management

API	Description
Create an account	Create an account.
Delete an account	Delete an account.
View the account list	View the account list.
Grant account permissions	Authorize account permissions.
Revoke account permissions	Revoke account permissions.
Modify account descriptions	Modify account remarks.
Reset the account password	Reset a password.
Reset an account	Reset an account.

RDS backup and recovery

API	Description
Create backups	Create a backup instance.
Clone RDS instances	Clone an RDS instance.
View the backup list	View the backup instance list.
Create a temporary instance	Create a temporary instance.
View the backup policy	View a backup policy.
Modify the backup list	Modify a backup policy.
Recover a backup set to an instance	Restore a backup set to an instance.
Delete data backup files	Delete data backup files.

RDS monitoring management

API	Description
View the instance resource usage	View the instance resource usage.
View instance performance data	View instance performance data.
Query monitoring behavior	Query monitoring behavior.
Modify monitoring behavior	Modify monitoring behavior.

RDS parameter management

API	Description
View database parameter templates	View the database parameter template.
View the list of currently running instance database parameters	View the database parameter operating list of the current instance.
Modify the database parameter list	Modify the database parameter list.

RDS data migration

API	Description
Obtain a file upload address	Obtain the address used for file upload.
View the database file list	View the data file list.
View the import list	View the import list.
Migrate data from other RDS instances	Migrate data from other instances.
Cancel an import task	Cancel migration.