

Alibaba Cloud ApsaraDB for MySQL

API Reference

Issue: 20180807

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Generic conventions

Table -1: Style conventions

Style	Description	Example
	This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: 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.	 Note: 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 a optional value, and only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	It indicates that it is a required value, and only one item can be selected.	<code>swich {stand slave}</code>

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1 Use APIs

1.1 API overview

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RDS instance management

API	Description
CreateDBInstance	Create an RDS instance.
DeleteDBInstance	Release an RDS instance.
RestartDBInstance	Restart an RDS instance.
DescribeDBInstanceAttribute	View the details of an RDS instance.
DescribeDBInstances	View an RDS instance table.
ModifyDBInstanceSpec	Change the type of an RDS instance.
ModifyDBInstanceConnectionMode	Change the RDS instance access mode.
DescribeRegions	Query the RDS region and zone information.
DescribeDBInstanceHAConfig	Query the RDS zone information and data replication status.
MigrateToOtherZone	Migrate to an RDS instance zone.
PurgeDBInstanceLog	Clear RDS instance logs.
UpgradeDBInstanceEngineVersion	Upgrade the RDS instance version.
ModifyDBInstanceDescription	Modify the RDS instance remarks.
ModifyDBInstanceMaintainTime	Change the RDS instance maintenance time.
ModifyDBInstanceHAConfig	Modify the policies of RDS instance data replication and high availability.
SwitchDBInstanceHA	Switch between the master and backup RDS instances.
CreateReadOnlyDBInstance	Create a read-only RDS instance.

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AllocateReadWriteSplittingConnection	中国站
CalculateDBInstanceWeight	中国站

中国站	中国站
ModifyReadWriteSplittingConnection	中国站
ReleaseReadWriteSplittingConnection	中国站

RDS database management

API	Description
CreateDatabase	Create a database.
DeleteDatabase	Delete a database.
DescribeDatabases	View the database list.
ModifyDBDescription	Modify database remarks.
CopyDatabase	中国站

RDS account management

API	Description
CreateAccount	Create an account.
DeleteAccount	Delete an account.
DescribeAccounts	View the account list.
GrantAccountPrivilege	Authorize account privileges.
RevokeAccountPrivilege	Revoke account privileges.
ModifyAccountDescription	Modify account remarks.
ResetAccountPassword	Reset a password.
ResetAccount	Reset an account.

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DescribeDBInstanceIPArrayList	中国站
DescribeDBInstanceSSL	中国站
DescribeDBInstanceTDE	中国站
ModifyDBInstanceSSL	中国站
ModifyDBInstanceTDE	中国站
ModifySecurityIps	中国站

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中国站	中国站
AllocateInstancePublicConnection	中国站
DescribeDBInstanceNetInfo	中国站
ModifyDBInstanceNetworkExpireTime	中国站
ModifyDBInstanceConnectionString	中国站
ModifyDBInstanceNetworkType	中国站
ReleaseInstancePublicConnection	中国站
SwitchDBInstanceNetType	中国站

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中国站	中国站
DescribeSlowLogs	中国站
DescribeSlowLogRecords	中国站
DescribeErrorLogs	中国站
DescribeBinlogFiles	中国站
DescribeSQLCollectorPolicy	中国站
ModifySQLCollectorPolicy	中国站
DescribeSQLLogRecords	中国站
DescribeSQLLogFiles	中国站

RDS backup recovery

API	Description
CreateBackup	Create a backup instance.
CloneDBInstance	中国站
DescribeBackups	View the backup instance list.
CreateTempDBInstance	Create a temporary instance.
DescribeBackupPolicy	View a backup policy.
ModifyBackupPolicy	Modify a backup policy.
RestoreDBInstance	Restore a backup set to an instance.
DeleteBackup	中国站

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CreateMigrateTask	中国站
DescribeMigrateTasks	中国站
DescribeOssDownloads	中国站

RDS monitoring management

API	Description
DescribeResourceUsage	View instance resource usage.
DescribeDBInstancePerformance	View instance performance data.
DescribeDBInstanceMonitor	Query monitoring behaviors.
ModifyDBInstanceMonitor	Modify monitoring behaviors.

RDS parameter management

API	Description
DescribeParameterTemplates	View a database parameter template.
DescribeParameters	View the database parameter run list of the current instance.
ModifyParameter	Modify the database parameter list.

RDS data migration

API	Description
CreateUploadPathForSQLServer	Obtain the address used for file upload.
DescribeFilesForSQLServer	View the data file list.
DescribeImportsForSQLServer	View the import list.
ImportDatabaseBetweenInstances	Migrate from other instances.
CancelImport	Cancel migration.

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AddTagsToResource	中国站

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DescribeTags	中国站
RemoveTagsFromResource	中国站

1.2 Public parameters

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Public request parameters

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

Name	Type	Required?	Description
Format	String	No	Type of the returned value. Values: JSON and XML. Default value: XML.
Version	String	Yes	API version number : Format: YYYY-MM-DD (date). The current version number is 2016-11-01.
AccessKeyId	String	Yes	Alibaba Cloud issues a secret key ID for visiting users.
Signature	String	Yes	Signature result string. For more information about the signature calculation method, see #### .
SignatureMethod	string	Yes	Signature method . Currently, HMAC-SHA1 is supported.
Timestamp	String	Yes	Timestamp of a request. The date format follows the ISO8601 standard and uses UTC time. Format: YYYY-MM-DDThh:mm:ssZ, for example, 2013-08

Name	Type	Required?	Description
			-15T12:00:00Z (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 . The user must use different random numbers for different requests.

Public return parameters

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

Request example

```
https://rds.aliyuncs.com/  
Format=xml  
&Version=2014-08-15  
&Signature=Pc5WB8gokVn0xfeu%2FZV%2BiNM1dgI%3D  
&SignatureMethod=HMAC-SHA1  
&SignatureNonce=15215528852396  
&SignatureVersion=1.0  
&AccessKeyId=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 input 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 for users to view. The actual returned results do not contain line breaks, indentation, and so on.

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-AC049166F216</RequestId>
  <!--Returned Result Data-->
</Interface Name+Response>
```

JSON format:

```
"RequestId": "4C467B38-3910-447D-87BC-AC049166F216",
/* Returned Result Data*/
```

Error results

When an error occurs in an interface call, no results are returned. The caller can refer to ##### # in the Appendix to identify the cause of the error.

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 the caller cannot identify the cause of the error, the caller can contact Alibaba Cloud Customer Service and provide the HostId and RequestId to help us solve the problem as quickly as possible.

XML format:

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

JSON example:

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

1.3 Request structure

Endpoint

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

Communication protocol

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

Request methods

Support for sending requests through HTTP GET method. This method requires that parameters be included in the request URL.

Request parameters

Each request needs to specify the action to be performed; that is, the Action parameter (e.g CreateDatabase). Each action needs to include public request parameters and characteristic request parameters of specified action.

Character encoding

Requests and responses are encoded using UTF-8.

1.4 Signature

RDS service 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 the user.

When a user calls a server, the following method is used to sign the request:

1. Construct a normalized request string (Canonicalized Query String) using the request parameter.
 - a. The request parameters are ordered alphabetically by the parameter names (this includes the public request parameters and user-defined parameters for the given request interfaces described in this document, but not the Signature parameter mentioned in public request parameters).



Note:

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. 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 (+).



Note:

Generally, libraries that support URL encoding (such as Java’s `java.net.URLEncoder`) are all encoded according to the rules for the “application/x-www-form-urlencoded” MIME-type. 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 encoding rules described preceding.

- 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 string to calculate the signature's HMAC value based on RFC2104 definitions.

**Note:**

The Key used for calculating the signature is the AccessKey Secret held by the user, 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 signing is as follows:

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

Thus, the StringToSign is:

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

Assume that the AccessKey ID is testid, the AccessKey Secret is testsecret, and the Key used for HMAC calculation is testsecret&. The calculated signature is: BIPOMlu8LXBeZtLQkJTw6iFvw1E=

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
```

```
&SignatureVersion=1.0&Version=2014-08-15&Signature=BIP0Mlu8LX  
BeZtLQkJTw6iFvw1E%3D
```

2 API Reference

2.1 Instance management

2.1.1 CreateDBInstance

Description

Create an RDS instance. For the detailed information of instance type, see Instance type table.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: CreateDBInstance .
RegionId	String	Yes	Data center. The length cannot exceed 50 characters. The DescribeRegions function can be used to view available data centers.
ZoneId	String	No	Zone ID. The DescribeRegions function can be used to view available zones.
Engine	String	Yes	Database type. Value options: MySQL/SQLServer/PostgreSQL/PPAS
EngineVersion	String	Yes	Database version. Value options: - MySQL: 5.5/5.6/5.7 - SQLServer: 2008r2/2012/2012/web/2016_web/2012_std_ha/

Name	Type	Required?	Description
			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 .
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 double 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. Internet: public network;

Name	Type	Required?	Description
			Intranet: private network.
DBInstanceDescription	String	No	- Instance description or remarks, no more than 256 bytes. - It cannot contain http:> instance descriptions or remarks. No more than 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.
SecurityIPList	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

Name	Type	Required?	Description
			(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. Postpaid: • Postpaid: Pay-As-You-Go; • Prepaid: Subscription.
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 optional values of UsedTime is [1,9]. • When the value of parameter Period is Month, the optional values of UsedTime is 1, 2, 3.
ClientToken	String	Yes	Used to guarantee idempotence.
InstanceNetworkType	String	No	• VPC: VPC instance;

Name	Type	Required?	Description
			- Classic: classic instance. - If no value is specified, a classic instance is created by default.
ConnectionMode	String	No	Performance: standard access mode; Safty: 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.
ConnectionString	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
&DBInstanceNetType=Internet
&SecurityIPList=11.11.11.11
&PayType=Postpaid
&ClientToken=ETnLKlblzczsh0Tub0CziJZNwHLYBQ
&<[Public Request Parameters]>
```

Response example

XML format

```
<CreateDBInstanceResponse>
  <OrderId>100789370230206</OrderId>
  <ConnectionString>rdsaiiabnaiiabn.mysql.rds.aliyuncs.com </
ConnectionString>
  <DBInstanceId>rdsaiiabnaiiabn</DBInstanceId>
  <port>3306</port>
  <RequestId>1E43AAE0-BEE8-43DA-860D-EAF2AA0724DC</RequestId>
</CreateDBInstanceResponse>
```

JSON format

```
"OrderId": "100789370230206",
"ConnectionString": "rdsaiiabnaiiabn.mysql.rds.aliyuncs.com",
"DBInstanceId": "rdsaiiabnaiiabn",
"Port": "3306",
"RequestId": "1E43AAE0-BEE8-43DA-860D-EAF2AA0724DC"
```

2.1.2 DeleteDBInstance

Description

Release an RDS instance. The following conditions must be met, otherwise the call will fail:

- The current status of instance: running.
- Not artificially locked.
- The instance is a master instance (Pay-As-You-Go type), read-only instance, disaster recovery instance, or temporary instance.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: DeleteDBInstance .
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=DeleteDBInstance
&DBInstanceId=rdsaiiabniiabn
&<[Public Request Parameters]>
```

Response example

XML format

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

JSON format

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

2.1.3 RestartDBInstance

Description

Generally an RDS instance can be restarted within 10s. If a large number of transactions must be submitted or rolled back, the restart may be extended by about one minute. The operation must meet the following conditions, otherwise the call will fail:

- The instance is running.
- The instance is not currently performing a backup task.

Request parameters

Name	Type	Required?	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=rdsaiiabnabn
&<Public Request Parameters>
```

Response example

XML format

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

JSON format

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

2.1.4 DescribeDBInstanceAttribute

Description

Show the detailed attributes of a specified instance.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: DescribeDBInstanceAttribute
DBInstanceId	String	Yes	Instance ID. Up to 30 IDs can be entered at a time, which are separated by commas (.).

Parameter of DBInstanceAttribute

Name	Type	Description
DBInstanceId	String	Instance ID.
PayType	String	- Postpaid: Pay-As-You-Go; - Prepaid: Subscription.
Dbinstancetype	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 network.
ConnectionMode	String	- Performance: standard access mode; - Safety: high security access mode.
RegionId	String	Region.
ZoneId	String	Zone.
ConnectionString	String	Connection address.
Port	String	Application access port.
Engine	String	Database type.
Engineversion	String	Database version.
DBInstanceClassType	String	Class Family. - s: Shared DB; - x: General Instance; - d: Dedicated Instance;

Name	Type	Description
		h: Dedicated Host..
DBInstanceClass	String	Instance type.
DBInstanceMemory	Long	Instance memory, in the unit of MB.
DBInstanceStorage	Integer	Instance storage space, in the unit of GB.
DBInstanceNetType	String	- Internet: public network; - Intranet: private network.
DBInstanceStatus	String	For instance status, see Instance status table .
DBInstanceDescription	String	Instance remarks.
LockMode	String	- UnLock: normal; - ManualLock: locked when manually triggered; - LockByExpiration: automatically locked upon expiration; - LockByRestoration: automatically locked before instance rollback; - LockByDiskQuota: automatically locked when the instance space is full.
LockReason	String	Reason why an instance is locked.
DBMaxQuantity	Integer	The maximum number of databases that can be created for an instance.
AccountMaxQuantity	Integer	Max number of accounts that can be created.
CreationTime	String	Creation time, in the format of YYYY-MM-DDThh:mm:ssZ, for example, 2011-05-30T12:11:4Z.

Name	Type	Description
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.
MaxIOPS	Integer	The maximum number of I/O requests, that is, IOPS.
MaxConnections	Integer	The maximum number of concurrent connections to an instance.
MasterInstanceId	String	ID of the primary instance. If this parameter is not returned (that is, if it is null), the current instance is a primary instance.
IncrementSourceDBInstanceId	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	If a disaster recovery instance is attached to the current instance, the ID of the disaster recovery instance applies.
TempDBInstanceId	String	If a temporary instance is attached to the current instance, the ID of the temporary instance applies.

Name	Type	Description
ReadOnlyDBInstanceIds	List<OnlyDBInstanceId>	ID list of read-only instances attached to the primary instance.
SecurityIPList	String	Deprecated. For more information, see DescribeDBInstanceIPArrayList interface.
AdvancedFeatures	String	This parameter is currently only valid for SQL Server instances. Obtain advanced properties values, and multiple values are separated by English comma (.). The return value is - LinkedServer -. DistributeTransaction

ReadOnlyDBInstanceId

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

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=DescribeDBInstanceAttribute
&DBInstanceId=rdsaiiabnabn
&<Public Request Parameters>
```

Return example

XML format

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

```

<Items>
  <DBInstanceAttribute>
    <LockMode>Unlock</LockMode>
    <ConnectionString>rdsfnjfq7vjnuj.mysql.rds.aliyuncs.com </
ConnectionString>
    <CreationTime>2014-10-10T10:28:48Z</CreationTime>
    <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>
    <ReadOnlyDBInstanceIds>
    <ReadOnlyDBInstanceId></ReadOnlyDBInstanceId>
    </ReadOnlyDBInstanceIds>
    <TempDBInstanceId></TempDBInstanceId>
    <DBInstanceMemory>240</DBInstanceMemory>
    <MaxIOPS>150</MaxIOPS>
    <DBInstanceType>Primary</DBInstanceType>
    <DBInstanceStatus>Running</DBInstanceStatus>
    <MasterInstanceId></MasterInstanceId>
    <EngineVersion>5.5</EngineVersion>
    <IncrementSourceDBInstanceId></IncrementSourceDBInstanceId>
    <GuardDBInstanceId></GuardDBInstanceId>
    <DBInstanceStorage>10</DBInstanceStorage>
    <DBInstanceDescription></DBInstanceDescription>
    <DBInstanceId>rdsfnjfq7vjnuj</DBInstanceId>
    <Paytype> postpaid </paytype>
    <ExpireTime></ExpireTime>
    <MaintainTime></MaintainTime>
    <DBInstanceClass>rds.mys2.small</DBInstanceClass>
    <SecurityIPList>11.11.11.11</SecurityIPList>
    <Port>3306</Port>
    <AdvancedFeatures>LinkedServer,DistributeTransaction</AdvancedFe
atures>
  </DBInstanceAttribute>
</CreateDBInstanceResponse>

```

JSON format

```

"Items": {
  "DBInstanceAttribute": [
    "LockMode": "Unlock",
    "ConnectionString": "rdsfnjfq7vjnuj.mysql.rds.aliyuncs.com",
    "CreationTime": "2014-10-10T10:28:48Z",
    "DBInstanceNetType": "Internet",
    "ReadOnlyDBInstanceIds": {
      "ReadOnlyDBInstanceId": []
    },
    "MaxConnections": 60,
    "LockReason": "",
    "Engine": "MySQL",
    "AvailabilityValue": "100.0%",
    "AccountMaxQuantity": 50,
    "DBMaxQuantity": 200,
    "RegionId": "cn-hangzhou",

```



```

"TempDBInstanceId": "",
"DBInstanceMemory": 240,
"MaxIOPS": 150,
"DBInstanceType": "Primary",
"DBInstanceStatus": "Running",
"MasterInstanceId": "",
"EngineVersion": "5.5",
"IncrementSourceDBInstanceId": "",
"GuardDBInstanceId": "",
"DBInstanceStorage": 10,
"DBInstanceDescription": "",
"DBInstanceId": "rdsfnjfq7vjnuj",
"PayType": "Postpaid",
"ExpireTime": "",
"MaintainTime": "",
"MaId": "RDS. mys2.small ",
"SecurityIPList": "11.11.11.11",
"Port": "3306"
"AdvancedFeatures": "LinkedServer,DistributeTransaction"

```

```
"RequestId": "27BB49FA-DA47-4162-B39D-FC001E35C1C1"
```

2.1.5 View RDS instance list

Description

Show the instance list or the instance list authorized by RAM.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: DescribeDBInstances .
RegionId	String	Yes	Instance region, viewed through the DescribeRegions .
Engine	String	No	Database type. Value options: MySQL, SQLServer, PostgreSQL, and PPAS. If no value is specified, all types are returned.
DBInstanceType	String	No	Instance type. Value options: - 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	The range of values is as follows: VPC: VPC instance;

Name	Type	Required	Description
			Classic: classic instance. If no value is specified, both types are returned.
Connection Mode	String	No	- Standard: standard access mode; - Safe: high security access mode. If no value is specified, both modes are returned.
Tags	String	No	The query is bound to an instance of the label in the form of a JSON incoming Value string, including tagkey and tagvalue, cannot be empty and tagvalue can be empty. Format example: {"key1": "value1 "}
PageSize	Integer	No	Number of records on each page. Value options: 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 .
Databases	List<Database>	Data composed of the databases.
PageNumber	Integer	Page number.
TotalRecordCount	Integer	Total number of records.
PageRecordCount	Integer	Number of DB instances on the current page.
Items	List<DBInstance>	Array 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 network. - Classic: classic network;
ConnectionMode	String	- Standard: standard access mode - Safe: high security access mode.
RegionId	String	Region.
Expiretime	String	Expiration time. Pay-As-You-Go instances never expire.
DBInstanceStatus	String	For more information, see the Appendix.
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 when the instance space is full.
LockReason	String	Reason why an instance is locked.
MasterInstanceid	String	ID of the primary instance. If this parameter is not returned (that is, if it is null), the current instance is a primary instance.
GuardDBInstanceid	String	If a disaster recovery instance is attached to the current instance, the ID of the disaster recovery instance applies.
TempDBInstanceid	String	If a temporary instance is attached to the current instance, the ID of the temporary instance applies.
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>rdsfmjfirvmjfirv</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>
<ReadOnlyDBInstanceIds>
  <ReadOnlyDBInstanceId></ReadOnlyDBInstanceId>
</ReadOnlyDBInstanceIds>
</DBInstance>
<DBInstance>
<DBInstanceDescription>testforcreate</DBInstanceDescription>
<ExpireTime></ExpireTime>
<DBInstanceId>rdsabqumfabqumf</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>
<MasterInstanceId></MasterInstanceId>
<GuardDBInstanceId></GuardDBInstanceId>
<TempDBInstanceId></TempDBInstanceId>
<ReadOnlyDBInstanceIds>
  <ReadOnlyDBInstanceId></ReadOnlyDBInstanceId>
</ReadOnlyDBInstanceIds>
</DBInstance>
```

```

</Items>
<PageNumber>1</PageNumber>
<TotalRecordCount>2</TotalRecordCount>
<RequestId>2553A660-E4EB-4AF4-A402-8AFF70A49143</RequestId>
</DescribeDBInstancesResponse>

```

JSON format

```

{
  "PageNumber": 1,
  "Items": {
    "DBInstance": [
      {
        "Engine": "MySQL",
        "DBInstanceType": "Primary",
        "DBInstanceStatus": "Running",
        "DBInstanceDescription": "testforRemarks",
        "LockMode": "Unlock",
        "RegionId": "cn-hangzhou",
        "ZoneId": "cn-hangzhou-a",
        "DBInstanceId": "rdsfmjfirvmjfirv",
        "PayType": "Prepaid",
        "ExpireTime": "2014-10-10T16:00:00Z",
        "DBInstanceNetType": "Internet",
        "LockReason": "",
        "MasterInstanceId": "",
        "GuardDBInstanceId": "",
        "TempDBInstanceId": "",
        "ReadOnlyDBInstanceIds": {
          "ReadOnlyDBInstanceId": []
        }
      },
      {
        "Engine": "MySQL",
        "DBInstanceType": "Primary",
        "DBInstanceStatus": "Running",
        "DBInstanceDescription": "testforcreate",
        "LockMode": "Unlock",
        "RegionId": "cn-hangzhou",
        "DBInstanceId": "rdsabqumfabqumf",
        "PayType": "Postpaid",
        "ExpireTime": "",
        "DBInstanceNetType": "Intranet",
        "LockReason": "",
        "MasterInstanceId": "",
        "GuardDBInstanceId": "",
        "TempDBInstanceId": "",
        "ReadOnlyDBInstanceIds": {
          "ReadOnlyDBInstanceId": []
        }
      }
    ]
  },
  "TotalRecordCount": 2,
  "PageRecordCount": 2,
  "RequestId": "2553A660-E4EB-4AF4-A402-8AFF70A49143"
}

```

```
}
```

2.1.6 Change the RDS instance type

Description

Change the type or storage space of Pay-As-You-Go instances. To use this interface, the following conditions must be met:

- The instance is running.
- The instance is not performing a backup task.
- 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 used space.
- Currently, only regular and read-only instances allow configuration changes. Configurations cannot be changed for disaster recovery and temporary instances.

Request parameters

Name	Type	Required	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 the Pay-As-You-Go instance.
DBInstanceClass	String	No	Instance type. For more information, see Instance type list .
DBInstanceStorage	Integer	No	User-defined storage space. The value range is as follows and the value must be an integer multiple of 5:

Name	Type	Required	Description
			• 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=rdsaiiabnaiiabn
&PayType=Postpaid
&DBInstanceStorage=10
&<Public Request Parameters>
```

Response example

XML format

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

JSON format

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

2.1.7 View RDS region and zone information

Description

Show the selectable RDS regions and zones. Before calling the CreateInstance interface, use this interface to view RegionId.

Request parameters

Name	Type	Required?	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
&<Public Request Parameters>
```

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



```
<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-B8B9-014A2135E6C3"
```

2.1.8 View RDS zone information and data replication statuses

Description

This interface is used to show instance zone information and data replication statuses.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: DescribeDBInstanceHAConfig .
DBInstanceId	String	Yes	Instance ID.

Return parameters

Name	Type	Description
<Public Return Parameters>		For more information, see Public parameters .
DBInstanceId	String	Instance ID.
SyncMode	String	- Sync: Synchronous. - Semi-sync: Semi-synchronous. - Async: Asynchronous.

Name	Type	Description
		For SQL Server 2012/2016 dual-machine high-availability version, the value is Sync or Async.
HAMode	String	- RP0: Data persistence is preferred. - RT0: Instance availability is preferred.
HostInstanceInfos	List<NodeInfo>	Master/slave node information.

NodeInfo

Name	Type	Description
NodeId	String	Unique ID of the master/slave node.
NodeType	String	- Master: master node. - Slave: slave node.
RegionId	String	Data center.
ZoneId	String	Zone.
SyncStatus	String	- NotAvailable - Syncing: synchronization in process, with a probability of data loss during a switchover. - Synchronized: synchronization completed. - NotSupport: unsupported engine type or version.
LogSyncTime	String	The time when the standby database receives logs.
DataSyncTime	String	The time when the standby database receives the data.

2.1.9 Migrate RDS instance zone

Description

Migrate an instance to another zone. For example, if Instance 1 is currently located in the “cn-hangzhou-a” zone of East China 1 (Hangzhou), you can call this interface to migrate the instance to the “cn-hangzhou-b” zone of Hangzhou.



Note:

In cross-zone migration, instances must be migrated within the same physical location. For example, instances in a zone of East China 1 (Hangzhou) cannot be migrated to zones of North China 1 (Qingdao).

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: MigrateToOtherZone .
DBInstanceId	String	Yes	Instance ID.
ZoneId	String	Yes	The DescribeRegions function can be used to view available zones.

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=MigrateToOtherZone
&DBInstanceId=rdsaiiabnaiiabn
&ZoneId=cn-hangzhou-b
&<Public Request Parameters>
```

Return example

XML format

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

```
</MigrateToOtherZoneResponse>
```

JSON format

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

2.1.10 Clear RDS instance logs

Description

For MySQL instances, all related Binlog logs are cleared. For SQL Server instances, a temporary backup is produced. When the temporary backup is finished, the RDS disk space is reduced.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: PurgeDBInstanceLog .
DBInstanceCld	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=PurgeDBInstanceLog
&DBInstanceId=rdsaiiabnaiiabn
&<Public Request Parameters>
```

Return example

XML format

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

JSON format

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

2.1.11 Upgrade the database version of RDS instance

Description

Upgrade the database version of an instance, for example, from MySQL 5.1 to MySQL 5.5.

If the primary instance is attached with a read-only or disaster recovery instance, please first upgrade the database version of the read-only or disaster recovery instance. The operation must meet the following conditions, otherwise the call will fail:

- 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?	Description
Action	String	Yes	Required parameter. Value: UpgradeDBInstanceEngineVersion
DBInstanceId	String	Yes	Instance to be upgraded/downgraded.
EngineVersion	String	Yes	Database version to be upgraded to.

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=rdsaiiabnailiabn
&EngineVersion=5.6
```

```
&<Public Request Parameters>
```

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"
```

2.1.12 Upgrade the database version of RDS instance

Description

Upgrade the database version of an instance, for example, from MySQL 5.1 to MySQL 5.5.

If the primary instance is attached with a read-only or disaster recovery instance, please first upgrade the database version of the read-only or disaster recovery instance. The operation must meet the following conditions, otherwise the call will fail:

- 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	Description
Action	String	Yes	Required parameter, Value: UpgradeDBInstanceEngineVersion
DBInstanceId	String	Yes	Instance to be upgraded/downgraded.
EngineVersion	String	Yes	Database version to be upgraded to.

Return parameters

Name	Type	Description
<Public Return Parameters>	-	For more information, see ### .
TaskId	Integer	Task ID.

Request example

```
https://rds.aliyuncs.com/?Action=UpgradeDBInstanceEngineVersion
&DBInstanceId=rdsaiiabnailiabn
&EngineVersion=5.6
&<Public Request Parameters>
```

Return 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"
```

2.1.13 ModifyDBInstanceMaintainTime

Description

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: ModifyDBInstanceDescription .
DBInstanceId	String	Yes	Instance ID.
DBInstanceDescription	String	Yes	Instance description.

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=ModifyDBInstanceDescription
&DBInstanceId=rdsaiiabnaiiabn
&DBInstanceDescription=testwangyichengdescribe
&<Public Request Parameters>
```

Response example

XML format

```
<Maid>
    <RequestId>17F57FEE-EA4F-4337-8D2E-9C23CAA63D74</RequestId>
</ModifyDBInstanceDescriptionResponse>
```

JSON format

```
"RequestId": " 17F57FEE-EA4F-4337-8D2E-9C23CAA63D74"
```

2.1.14 Modify the instance data replication mode and high availability switching rules

Description

Modify the instance data replication mode and high availability switching rules.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: ModifyDBInstanceHAConfig .
DBInstanceId	String	Yes	Instance ID.
SyncMode	String	String	Sync: synchronous . Semi-sync: semi-synchronous. Async: asynchronous.
HAMode	String	String	RPO: data persistence of top priority. RTO:

Name	Type	Required?	Description
			instance availability of top priority.

Return parameters

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

2.1.15 SwitchDBInstanceHA

Description

RDS instances are composed of master and slave databases distributed across different servers . You can use the API to switch between the master and slave databases, and new master databases afford the service traffic.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: SwitchDBInstanceHA .
DBInstanceid	String	Yes	Instance ID.
Nodeid	String	Yes	Unique ID of a node. You can view the value of this parameter through the DescribeDBInstanceHAConfig interface.
Force	String	No	- Yes: forced; - No: unforced,default value: unforced.

Return parameters

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

Request example**Return example**

2.1.16 CreateReadOnlyDBInstance

Description

Create a read-only instance for an RDS instance. The following conditions must be met, otherwise the creation will fail:

- The master instance is running and not in switchover status.
- The read-only instance and master instance must be in the same region.
- The database version of the read-only instance must be the same as or later than that of the master instance. The master instance must have a version of at least MySQL 5.6.
- The read-only instance must have a version of at least MySQL 5.6.
- A single RDS instance can have up to five read-only instances.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: CreateReadOnlyDBInstance .
RegionId	String	Yes	Data center. The length cannot exceed 50 characters. DescribeRegions function can be used to view available data centers.
ZoneId	String	Yes	Zone ID. The DescribeRegions function can be used to view available zones.
DBInstanceId	String	Yes	ID of a master instance.
EngineVersion	String	Yes	Database version number. Only value supported: 5.6.

Name	Type	Required	Description
DBInstanceClass	String	Yes	Instance type. For more information, see the Appendix.
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 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.
PayType	String	Yes	Postpaid.
ClientToken	String	Yes	Used to guarantee idempotence.
InstanceNetworkType	String	No	- If no value is specified, a classic instance is created by default. - VPC: VPC instance . Classic: classic instance.
VPCId	String	No	VPC ID.

Name	Type	Required	Description
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 ### .
DBInstanceId	String	DBInstanceId
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=rdsaiiabnaiiabn
&EngineVersion=5.6
&DBInstanceClass=rds.mys2.small
&DBInstanceStorage=10
&PayType=Postpaid
&ClientToken=ETnLKlblzczsh0TubOCziJZNwHLYBQ
&<[Public Request Parameters]>
```

Return example

XML format

```
<CreateDBInstanceResponse>
  <OrderId>100789370230206</OrderId>
  <ConnectionString>rdsaiiabnaiiabn.mysql.rds.aliyuncs.com </
ConnectionString>
  <DBInstanceId>rdsaiiabnaiiabn</DBInstanceId>
  <port>3306</port>
  <RequestId>1E43AAE0-BEE8-43DA-860D-EAF2AA0724DC</RequestId>
```

```
</CreateDBInstanceResponse>
```

JSON format

```
"OrderId": "100789370230206",
"ConnectionString": "rdsaiabnabn.mysql.rds.aliyuncs.com",
"DBInstanceId": "rdsaiabnabn",
"Port": "3306",
"RequestId": "1E43AAE0-BEE8-43DA-860D-EAF2AA0724DC"
```

2.2 Database management

2.2.1 Create database

Description

Create a new database in an instance. The interface must meet the following conditions, otherwise the call will fail:

- The instance status is Running.
- The instance is not locked.
- The maximum number of databases in the instance is not exceeded.
- The instance type is primary instance.



Note:

Users of PostgreSQL and PPAS instances are permitted to perform the CREATE DATABASE operation through SQL. Therefore, this interface does not support PostgreSQL and PPAS.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: CreateDatabase .
DBInstanceId	String	Yes	Instance name.
DBName	String	Yes	Name of the database. The name must be unique and comply with the following rules: • Consist of lower case letters,

Name	Type	Required	Description
			numbers, and underlines • Must start with a letter and have no more than 64 characters • For other invalid characters, see###
CharacterSetName	String	Yes	Character set. The value range is limited to the following: • MySQL type: — utf8 — gbk — latin1 — utf8mb4 (included in versions 5.5 and 5.6) • SQLServer type: — ChinesePRC_CI_AS — Chinese_PRC_CS_AS — SQL_Latin1_General_CP1_CI_AS — SQL_Latin1_General_CP1_CS_AS — Chinese_PRC_BIN
DBDescription	String	No	Database description, which must meet the following requirements:

Name	Type	Required	Description
			- The length is 2 to 256 characters. - It cannot begin with <code>https://</code> or <code>https://</code> ; - It must start with a Chinese character or English letter . It can include Chinese and English characters , hyphens (-), and digits.

Response parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=CreateDatabase
&CharacterSetName=gbk
&DBName=testdb02
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&<[Common request parameters]>
```

Response example

XML format

```
<CreateDatabaseResponse>
  <RequestId>5A77D650-27A1-4E08-AD9E-59008EDB6927</RequestId>
</CreateDatabaseResponse>
```

JSON format

```
"RequestId": "5A77D650-27A1-4E08-AD9E-59008EDB6927"
```

2.2.2 Delete database

Description

You can delete databases from instances. To do this, the interface must meet the following conditions, otherwise the call will fail:

- The instance status is Running.
- The instance type is primary instance.



Note:

Users of PostgreSQL and PPAS instances are permitted to perform the DROP DATABASE operation through SQL. Therefore, this interface does not support PostgreSQL and PPAS.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: DeleteDatabase .
DBInstanceId	String	Yes	Instance ID.
DBName	String	Yes	Name of a database.

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=DeleteDatabase
&DBName=testdb02
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&<[Public Request Parameters]>
```

Return example

XML format

```
<DeleteDatabaseResponse>
  <RequestId>5A77D650-27A1-4E08-AD9E-59008EDB6927</RequestId>
```



```
</DeleteDatabaseResponse>
```

JSON format

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

2.2.3 View the database list

Description

Retrieve the database list information for the specified instances and databases. If the search parameter type is incorrect, an error prompt is returned and the returned data is blank.



Note:

This interface does not support PostgreSQL or PPAS.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: DescribeDatabases .
DBInstanceId	String	Yes	Instance ID.
DBName	String	No	Name of a database.
DBStatus	String	No	Status of a database. Values: • Creating • Running • Deleting

Return parameters

Name	Type	Description
<Public return parameter>		For more information, see Public parameters .
Databases	List<Database>	Data composed of the databases.

DATABASE parameters

Name	Type	Description
DBName	String	Name of a database.
DBInstanceId	String	ID of the instance to which the database belongs.
Engine	String	Database instance type.
DBStatus	String	Status of a database. Values: • Creating • Running • Deleting
CharacterSetName	String	Character set.
DBDescription	String	Database description.
Accounts	List<AccountPrivilegeInfo>	List composed of the accounts.
Account	String	Name of an account.
AccountPrivilege	String	Permissions of the account on the database.

AccountPrivilegeInfo parameters

Name	Type	Description
Account	String	Name of an account.
AccountPrivilege	String	Permissions of the account on the database.

Request example

```
https://rds.aliyuncs.com/?Action=DescribeDatabases
&DBInstanceId=rds3meynazqbzju
&<Public Request Parameters>
```

Response example**XML format:**

```
< DescribeDatabasesResponse>
  <RequestId>2603CA96-B17D-4903-BC04-61A2C829CD94</RequestId>
  <Databases>
    <Database>
      <Engine>MySQL</Engine>
      <DBName>testdb</DBName>
      <CharacterSetName>utf8</CharacterSetName>
```

```

        <DBStatus>Creating</DBStatus>
        <DBInstanceId>rds3meynazqbzju</DBInstanceId>
        <Accounts>
            <AccountPrivilegeInfo></AccountPrivilegeInfo>
        </Accounts>
    </Database>
    <Database>
        <Engine>MySQL</Engine>
        <DBName>testdb2</DBName>
        <CharacterSetName>gbk</CharacterSetName>
        <DBStatus>Creating</DBStatus>
        <DBInstanceId>rds3meynazqbzju</DBInstanceId>
        <Accounts>
            <AccountPrivilegeInfo></AccountPrivilegeInfo>
        </Accounts>
    </Database>
</Databases>
</ DescribeDatabasesResponse>

```

JSON format:

```

{
  "RequestId": "2603CA96-B17D-4903-BC04-61A2C829CD94",
  "Databases": {
    "Database": [
      {
        "Engine": "MySQL",
        "CharacterSetName": "utf8",
        "DBStatus": "Creating",
        "DBDescription": "",
        "DBInstanceId": "rds3meynazqbzju",
        "Accounts": {
          "AccountPrivilegeInfo": []
        },
        "DBName": "testdb"
      },
      {
        "Engine": "MySQL",
        "CharacterSetName": "gbk",
        "DBStatus": "Creating",
        "DBDescription": "",
        "DBInstanceId": "rds3meynazqbzju",
        "Accounts": {
          "AccountPrivilegeInfo": []
        },
        "DBName": "testdb2"
      }
    ]
  }
}

```

2.2.4 Modify database remarks

Description

This interface is used to modify an instance remark name to allow you to easily record the instance. For example, you can modify the remark name to Instance Database A for Alibaba Cloud Testing Environment.

**Note:**

This interface does not support PostgreSQL or PPAS.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: ModifyDBDescription .
DBInstanceId	String	Yes	Instance ID.
DBName	String	Yes	Name of a database.
DBDescription	String	Yes	Modify the database remarks.

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=ModifyDBDescription
&DBInstanceId=rdsaiiabnailiabn
&DBInstanceDescription=testwangyichengDBdescribe
&<Public Request Parameters>
```

Response example**XML format**

```
< ModifyDBDescriptionResponse>
  <RequestId>17F57FEE-EA4F-4337-8D2E-9C23CAA63D74</RequestId>
</ ModifyDBDescriptionResponse>
```

JSON format

```
{
  "RequestId": " 17F57FEE-EA4F-4337-8D2E-9C23CAA63D74"
```

```
}
```

2.2.5 Copy a database for SQL Server 2008 R2

Description

The CopyDatabase API copies a SQL Server 2008 R2 database.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: CopyDatabase .
DBInstanceId	String	Yes	Instance ID. This API supports only SQL Server 2008 R2 databases.
SrcDBName	String	Yes	Name of the source database. The name must exist in the instance and comply with the following rules: • Start with a letter; • Contain only lowercase letters, digits, underscores (_), and hyphens (-); • Cannot exceed 64 characters; • For other invalid characters, see Forbidden keywords table
DstDBName	String	Yes	Name of the target database. The name must be unique and comply with the following rules: • Start with a letter;

Name	Type	Required	Description
			• Contain only lowercase letters, digits, underscores (_), and hyphens (-); • Cannot exceed 64 characters; • For other invalid characters, see Forbidden keywords table
ReserveAccount	String	Yes	Whether to reserve the account of the source database. • If the account is reserved, it is copied to the target database. • Otherwise, the target database does not reserve the user account. The optional values are 0 and 1, and the default value is 1.
DBDescription	String	No	Database description. The length is up to 256 characters.

Response parameters

Name	Type	Description
<Common response parameters>	String	For more information, see Public parameters .
RequestId	String	Request ID.
DBName	String	Database name.
DBStatus	String	Database status. The optional values are as follows:

Name	Type	Description
		• Creating • Running • Deleting
TaskId	String	Task ID.

2.3 Account management

2.3.1 Create an account

Description

Create an account for a database. For instances of the same user, a single account can be used to operate multiple databases. A single account can have different permissions on different databases.

The following conditions must be met, otherwise account creation will fail:

- The instance status is Running.
- The current database status is Running.
- The current instance is not locked.
- The maximum number of accounts for a single instance is not exceeded.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: CreateAccount .
DBInstanceId	String	Yes	Instance ID.
AccountName	String	Yes	Account name, which must be unique and meet the following requirements: • Start with a letter; • Consist of lower-case letters, digits,

Name	Type	Required?	Description
			and underscores (_); - Contain no more than 16 characters. - For other invalid characters, see Forbidden keywords table.
AccountPassword	String	Yes	Operation password. It may consist of letters , digits, or underlines, with a length of 6 to 32 characters.
AccountType	String	No	Privilege type of account. - Normal: Common privilege. - Super: High privilege. And the default value is Normal. - This parameter is valid for MySQL 5.5 /5.6 only. - MySQL 5.7, SQL Server 2012/2016 , PostgreSQL, and PPAS each can have only one initial account. Other accounts are created by the initial account that has logged on to the database.
AccountDescription	String	No	Account remarks. It cannot begin with http:// or https://.

Name	Type	Required?	Description
			- It must start with a Chinese character or English letter. - It can include Chinese and English characters/letters, underscores (_), hyphens (-), and digits. - The length may be 2-256 characters.

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=CreateAccount
&AccountName=testacc02
&AccountPassword=pw1234
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&<[Public Request Parameters]>
```

Response example

XML format:

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

JSON format:

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

2.3.2 Delete an account

Description

Directly delete database accounts. The instance status must be Running.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: DeleteAccount .
DBInstanceId	String	Yes	Instance ID.
AccountName	String	Yes	Account name, which must be unique and meet the following requirements: • Start with a letter; • Consist of lower-case letters, digits, and underscores (_); • Contain no more than 16 characters. • For invalid characters, see Forbidden keywords table

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=DeleteAccount
&DBInstanceId=riaqu32iaeiyeuya1370317952018
&AccountName=wangyichengtest
&<[Public Request Parameters]>
```

Response example

XML format

```
<DeleteAccountResponse>
  <RequestId>91E855E5-7E80-4955-929B-C74EE1D38C66</RequestId>
```

```
</DeleteAccountResponse>
```

JSON format

```
{
  "RequestID": "91E855E5-7E80-4955-929B-C74EE1D38C66"
}
```

2.3.3 View the account list

Description

Retrieve account list information for the specified instance and the specified database or the information of the specified account.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: DescribeAccounts .
DBInstanceCld	String	Yes	Instance ID.
AccountName	String	No	Name of an account.

Return parameters

Name	Type	Description
<Public Return Parameters>		For more information, see Public parameters .
Accounts	List<DBInstanceAccount>	Array composed of the accounts.

DBInstanceAccount parameters

Name	Type	Description
DBInstanceCld	String	ID of the instance to which the account belongs.
AccountName	String	Name of the database operation account.
AccountStatus	String	Account status. Values: Unavailable

Name	Type	Description
		Available
AccountDescription	String	Account remarks.
DatabasePrivileges	List<DatabasePrivilege>	Array composed of DatabasePrivileges.
AccountType	String	Type of account. - Normal: Common privilege. - Super: High privilege.

DatabasePrivilege parameters

Name	Type	Description
DBName	String	Name of a database.
AccountPrivilege	String	Name of the database account

Request example

```
https://rds.aliyuncs.com/?Action=DescribeAccounts
&DBInstanceId=rdsbauiubauie
&<Public Request Parameters>
```

Response example

XML format

```
<DescribeAccountsResponse>
  <RequestId>2603CA96-B17D-4903-BC04-61A2C829CD94</RequestId>
  <Accounts>
    <DBInstanceAccount>
      <AccountName>MySQL</AccountName>
      <DBInstanceId>testdb</DBInstanceId>
      <AccountStatus>utf8</AccountStatus>
      <AccountDescription></AccountDescription>
      <DatabasePrivileges>
        <DatabasePrivilege></DatabasePrivilege>
      </DatabasePrivileges>
    </DBInstanceAccount>
  </Accounts>
</DescribeAccountsResponse>
```

JSON format

```
{
  "Accounts": {
    "DBInstanceAccount": [
      {
```

```

    "AccountDescription": "",
    "DBInstanceId": "rdsbaueubauie",
    "DatabasePrivileges": {
      "DatabasePrivilege": []
    },
    "AccountStatus": "Unavailable",
    "AccountName": "testaccount"
  },
  "RequestId": "8D9A9689-F108-43B4-9D2E-0A52FF42B008"
}

```

2.3.4 Grant account permissions

Description

Grant database access permissions to accounts. A single account can be associated with one or more databases. If the specified account already has the access permission on the specified database, the operation directly returns a successful result.



Note:

Instance status must be Running.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: GrantAccountPrivilege .
DBInstanceId	String	Yes	Instance ID.
AccountName	String	Yes	Name of an account.
DBName	String	Yes	Name of the database associated with this account.
AccountPrivilege	String	Yes	Account permission. Values: - ReadOnly - ReadWrite

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=GrantAccountPrivilege
&AccountName=testacc02
&AccountPrivilege=ReadWrite
&DBName=testdb03
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&<Public Request Parameters>
```

Response example

XML format

```
<GrantAccountPrivilegeResponse>
  <RequestId>81BC9559-7B22-4B7F-B705-5F56DEECDEA7</RequestId>
</GrantAccountPrivilegeResponse>
```

JSON format

```
{
  "RequestId": "81BC9559-7B22-4B7F-B705-5F56DEECDEA7"
}
```

2.3.5 Revoke account permissions

Description

Delete an account's access permission on a database. The following conditions must be met, otherwise deletion will fail:

- The current database instance status is Running.
- The current database status is Running.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: RevokeAccountPrivilege .
DBInstanceId	String	Yes	Instance ID.
AccountName	String	Yes	Name of an account.

Name	Type	Required	Description
DBName	String	Yes	Name of a database.

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=RevokeAccountPrivilege
&AccountName=testacc02
&DBName=testdb03
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&<Public Request Parameters>
```

Return example

XML format

```
<RevokeAccountPrivilegeResponse>
  <RequestId>E22099CA-A61E-4992-A0B7-CE82DC175626</RequestId>
</RevokeAccountPrivilegeResponse>
```

JSON format

```
{
  "RequestId": "E22099CA-A61E-4992-A0B7-CE82DC175626"
}
```

2.3.6 Modify account description

Description

Modify an instance remark name to allow you to easily record the instance. For example, you can modify the remark name to Alibaba Cloud Testing Environment Instance Account A.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: ModifyAccountDescription .
DBInstanceId	String	Yes	Instance ID.

Name	Type	Required	Description
AccountName	String	Yes	Account name, which must be unique and meet the following requirements: - Start with a letter; - Consist of lower-case letters, digits, and underscores (_); - Contain no more than 16 characters. - For other invalid characters, see Forbidden keywords table.
AccountDescription	String	Yes	Modified content of the account remarks. - It must start with a Chinese character or English letter. - It cannot begin with http:// or https://. - It can include Chinese and English characters/ letters, underlines (_), hyphens (-), and numbers. - The length is 2-256 characters.

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=ModifyAccountDescription
&DBInstanceId=rdsaiiabnabn
&AccountName=wangyichengtest
&AccountDescription=testAccoutdescribe
&<Public Request Parameters>
```

Return example

XML format

```
< ModifyAccountDescription>
  <RequestId>17F57FEE-EA4F-4337-8D2E-9C23CAA63D74</RequestId>
</ ModifyAccountDescription>
```

JSON format

```
{
  "RequestId": " 17F57FEE-EA4F-4337-8D2E-9C23CAA63D74"
}
```

2.3.7 Reset the instance password

Description

Reset the account password. The following conditions must be met, otherwise the operation will fail:

- The instance status is Running.
- The instance is not locked.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: ResetAccountPassword .
DBInstanceId	String	Yes	Instance ID.
AccountName	String	Yes	Name of an account.
AccountPassword	String	Yes	A new password. It may consist of letters, numbers, or underlines, with a length of 6 to 32 characters.

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=ResetAccountPassword
&AccountName=testacc02
&AccountPassword=newpw1234
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&<Public Request Parameters>
```

Response example

XML format

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

JSON format

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

2.3.8 Reset an account

Description

Reset the initial account or master account of an instance.



Note:

This API is not applicable to MySQL 5.5/5.6 instance that has no master account or SQL Server 2008 R2 instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: ResetAccount .
DBInstanceId	String	Yes	Instance ID.
AccountName	String	Yes	Name of an account.

Name	Type	Required	Description
AccountPassword	String	Yes	Account password.

Return parameters

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

2.4 Read/Write splitting

2.4.1 Enable or disable the database proxy

Description

Enable or disable the database proxy function. This interface applies only to RDS for MySQL instances.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: ModifyDBInstanceConnectionMode .
DBInstance Id	String	Yes	Instance ID.
Connection Mode	String	Yes	- Standard: disable the database proxy function. - Safe: enable the database proxy function.

Return parameters

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

2.4.2 Apply for a read/write splitting address

Description

You can apply for a read/write splitting address in the high security mode for a master instance that has read-only instances. The read/write splitting address does not affect the addresses of the master instance and its read-only instances, nor does it affect the application for intranet and Internet addresses.

The following conditions must be met, or the operation fails:

- The database proxy function is enabled for the instance.
- The master instance is running.
- No migration tasks is ongoing.
- The master instance has read-only instances.
- The instance link is in the high security mode.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Set this parameter to AllocateReadWriteSplittingC
DBInstanceId	String	Yes	Name of a master instance.
ConnectionStringPrefix	String	No	• Prefix of the read/write splitting connection string. It must be globally unique. • The prefix must be a string of up to 30 characters including lowercase letters and hyphens (-). It must start with a letter. • The default prefix is in the format of "instance name + rw".

Name	Type	Required	Description
Port	Int	No	Port number, ranging from 3001 to 3999. The default value is 3306.
MaxDelayTime	Int	No	- Delay threshold, in seconds. The value range is 0 to 7200. If this parameter is not set, the default value is 30. - Read requests are not routed to the read-only instances with a delay greater than the threshold.
NetType	String	No	Network type of the read/write splitting connection string. Values are as follows: - Internet - Intranet. This is the default value. The Intranet type must be consistent with that of the master instance.
PrivateIpAddress	String	No	If the master instance uses the VPC network, and the network type of the read/write splitting link is set to Intranet, you can set this parameter to the VPC IP address of the read/write splitting link.

Name	Type	Required	Description
			If this parameter is not set, the VPC IP address of the read/write splitting link is automatically allocated.
DistributionType	String	Yes	Read weight distribution mode. Values are as follows: - Standard: indicates automatic weight distribution based on types. - Custom: indicates custom weight distribution.
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: {"Instanceid"."Weight","Instanceid"."Weight"} - This parameter must be set when DistributionType is set to Custom. - This parameter is invalid when

Name	Type	Required	Description
			DistributionType is set to Standard.

Response parameters

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

2.4.3 Check system-distributed weights

Description

This API checks the read weight distributed to each instance when weights are distributed by the system.

This API can only be performed on unlocked instances. Otherwise, the operation fails.

Request parameters

Name	Type	Required	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 response parameters>	-	For more information, see Public parameters .
DBInstanceWeights	List	Instance weight that is calculated by the system in real time.

DBInstanceWeight

Name	Type	Description
DBInstanceid	String	Instance ID.
DBInstanceType	String	Instance type. Optional values: • Master: Refers to a master instance. • Readonly: Refers to a read-only instance.
Weight	String	The weight that should be distributed to the instance.

2.4.4 Modify the basic information of read/write splitting

Description

This API changes the maximum delay of the read/write splitting link or the weight for each instance.

The following conditions must be met, or operation fails:

- The target instance is running.
- No migration task is ongoing.
- The target instance is not locked.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Set this parameter to ModifyReadWriteSplittingCor
DBInstanceid	String	Yes	Name of a master instance.
MaxDelayTime	Int	No	• Delay threshold, in seconds. • Read requests are not routed

Name	Type	Required	Description
			to the 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. Values are as follows: - Standard indicates automatic weight distribution based on specifications. - Custom indicates custom weight distribution. - Either MaxDelayTime or DistributionType must be set.
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>

Name	Type	Required	Description
			- 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 response parameters>	-	For more information, see Public parameters .

2.4.5 Release a read/write splitting address

Description

This API releases a read/write splitting address.

Request parameters

Name	Type	Required?	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 response parameters>	-	For more information, see Public parameters .

2.5 Security management

2.5.1 View the IP address whitelist of an RDS instance

Description

Show the list of IP addresses that are allowed to access an instance.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: DescribeDBInstanceIPArrayLi
DBInstanceId	String	Yes	Instance ID.

Return parameters

Name	Type	Description
<Public Return Parameters>		For more information, see Public parameters .
Items	List<DBInstanceIPArray>	List of IP address whitelist arrays of an instance.

DBInstanceIPArray parameters

Name	Type	Description
DBInstanceIPArrayName	String	Name of an IP address whitelist array.
DBInstanceIPArrayAttribute	String	This parameter is left blank by default. This parameter differentiates attribute values. The console does not display arrays labeled with “hidden”.
SecurityIPList	String	List of IP addresses under the IP address whitelist array. The list contains up to 1,000 IP addresses, separated by

Name	Type	Description
		commas. 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]).

2.5.2 View SSL information

Description

This interface only supports MySQL 5.5, MySQL 5.6, and SQL Server 2008R2.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: DescribeDBInstanceSSL .
DBInstanceId	String	Yes	Instance ID.

Return parameters

Name	Type	Description
<Public Return Parameters>	-	For more information, see Public parameters .
ConnectionString	String	Connection address protected by the SSL certificate.
SSLExpireTime	String	Expiration time of the SSL certificate.

Name	Type	Description
RequireUpdate	String	• Yes: Immediate upgrade is recommended. • No: Immediate upgrade is not recommended.
RequireUpdateReason	String	Reasons why upgrade is recommended.

2.5.3 View the data encryption status of an instance

Description

This interface only supports MySQL 5.5, MySQL 5.6, and SQL Server 2008 R2.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: DescribeDBInstanceTDE .
DBInstanceID	String	Yes	Instance ID.

Return parameters

Name	Type	Description
<Public Return Parameters>		For more information, see Public parameters .
TDEStatus	String	TDE status of an instance. Value options: • Enabled: TDE enabled. • Disabled: TDE disabled.
Databases	List<DataBase>	Data composed of the databases.

DataBase

Name	Type	Description
DBName	String	Database name
TDEStatus	String	TDE status of a database. Value options: • Enabled: TDE enabled. • Disabled: TDE disabled.

2.5.4 Modify SSL links of an instance

Description

This interface only supports MySQL 5.5, MySQL 5.6, and SQL Server 2008 R2.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: ModifyDBInstanceSSL .
DBInstanceId	String	Yes	Instance ID.
ConnectionString	String	Yes	Each instance can only have one connected address protected by the SSL certificate. Create or upgrade the SSL certificate for the target connection address.

Return parameters

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

Name	Type	Description
SSLExpireTime	String	SSL expiration time.

2.5.5 Modify the data encryption status of an instance

Description

This interface only supports MySQL 5.6 and SQL Server 2008 R2:

- MySQL 5.6 supports only TDE enabling of instances, and does not accept the value of DBName. After activating TDE, if you want to recover data to a local server, decrypted the data through RDS first.
- Before activating TDE, you need to activate KMS. If you have not activated KMS, you can activate it according to the guidance during the TDE activation.
- SQL Server 2008R2 supports only TDE enabling and disabling of databases. When TDE is enabled on a database, the TDE status of the related instance is changed (can only be enabled).
- For MySQL 5.6, you can enable TDE only for instances. Therefore, the value of DBName is not accepted.
- After TDE is enabled, it cannot be disabled. TDE also results in considerable increase in CPU usage.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: ModifyDBInstanceTDE .
DBInstanceId	String	Yes	Instance ID.
TDEStatus	String	Yes	- Enabled: TDE enabled. - Disabled: TDE disabled.
DBName	String	No	Database name. Up to 50 names can be

Name	Type	Required	Description
			entered at a time, which are separated by commas (.).

Return parameters

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

2.5.6 Modify the IP address whitelist of an RDS instance

Description

Modify the list of IP addresses that are allowed to access an instance. The operation is successful only if, the following conditions are fulfilled:

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

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: ModifySecurityIps .
DBInstanceId	String	Yes	Instance ID.
SecurityIps	String	No	List of IP addresses under the IP address whitelist array. The list contains up to 1,000 IP addresses, separated by commas. Supported formats include • 0.0.0.0/0, 10.23.12.24 (IP),

Name	Type	Required?	Description
			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]).
DBInstanceIPArrayName	String	No	Name of an IP address whitelist array. If no value is specified, the "Default" array is used. Note: One instance supports 50 whitelist arrays at most.
DBInstanceIPArrayAttribute	String	No	This parameter is left blank by default. This parameter differentiates attribute values. The console does not display arrays labeled as "hidden".
Modifymode	String	No	Modification method. Optional values are as follows: - Cover: Overwrite the original whitelist. - Append: Append the whitelist. - Delete: Delete the whitelist.

Return parameters

Name	Type	Description
RequestId	String	For more information, see Public parameters .
TaskId	String	Task ID.

Request example

```
https://rds.aliyuncs.com/?Action=ModifySecurityIps
&DBInstanceId=rdsaiiabnailiabn
&SecurityIps=192.168.1.2
&<Public Request Parameters>
```

Return example

XML format:

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

JSON format:

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

2.6 Network management

2.6.1 Apply for an Internet connection string

Description

Apply for an Internet connection string of an instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: AllocateInstancePublicConnection
DBInstanceId	String	Yes	Instance ID.
ConnectionStringPrefix	String	Yes	Prefix of an Internet connection string. The prefix is the Internet address. You can

Name	Type	Required	Description
			find it on the Basic Information page of the RDS console.
Port	String	Yes	Internet port.

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=AllocateInstancePublicConnection
&DBInstanceId=rdsaiiabnaiiabn
&<Public Request Parameters>
```

Return example

XML format

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

JSON format

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

2.6.2 View all connection strings

Description

View all the connection information of a specified instance.

Request parameters

Name	Type	Required or not	Description
Action	String	Yes	Required parameter. Value: DescribeDBInstanceNetInfo .
DBInstanceId	String	Yes	ID of a single instance.

Name	Type	Required or not	Description
中国站	中国站	中国站	中国站 - 中国站 - 中国站 - 中国站

Return parameters

Name	Type	Description
<Public Return Parameters>		For more information, see ### .
DBInstanceNetInfos	List<DBInstanceNetInfo>	Connection information of an instance.
InstanceNetworkType	String	- Classic: classic instance. - VPC: VPC instance;

DBInstanceNetInfo parameters

Name	Type	Description
ConnectionString	String	DNS connection string.
IPAddress	String	IP address.
IPType	String	- For a classic instance, “Inner” and “Public” apply; - for a VPC instance, “Private” and “Public” apply.
Port	String	Port information.
VPCId	String	VPC ID.
VSwitchId	String	VSwitch ID.
ConnectionStringType	String	Connection string type. - Normal: Normal connection address. - ReadWriteSplitting: Read/write splitting address.
MaxDelayTime	String	The upper limit of the delay duration threshold. It is

Name	Type	Description
		returned for read/write splitting links. Instances with delay exceeding the value of this parameter can only be read but cannot be allocated to traffic. The parameter unit is second.
DistributionType	String	Read request allocation policy. This parameter is returned for read/write splitting links. • Standard: Specification-based automatic weight allocation. • Custom: Customized weight allocation.
DBInstanceWeights	List	Instance weight information. This parameter is returned for read/write splitting links.

DBInstanceNetInfo parameters

Name	Type	Description
DBInstanceCld	String	Instance ID.
DBInstanceType	String	Instance type. • Master: Master instance. • Readonly: Read-only instance.
Weight	String	Instance weight.
Availability	String	Instance status. • Unavailable: Unavailable • Available: Available

Request example**Response example**

2.6.3 Change the expiration time of the original classic endpoint

Description

When the instance is in the hybrid access mode (both the VPC and classic network endpoints are existing 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: ModifyDBInstanceNetworkExp
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: - the classic network string of the current instance - and the classic network string of the read/write splitting.
ClassicExpiredDays	Integer	Yes	The retention days of the classic network string: [1-120].

Return parameters

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

2.6.4 Modify connection string

Description

This interface 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
DBInstanceCld	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 .

2.6.5 Modify the network type of an RDS instance

Description

Switches VPC RDS to Classic mode, or vice versa.



Note:

Only the Classic instances with the ConnectionMode of **Safty** can be switched to VPC mode.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: ModifyDBInstanceNetworkType
DBInstanceId	String	Yes	Instance ID.
InstanceNetworkType	String	Yes	- VPC: VPC instance; - Classic: classic instance.
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.
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

Name	Type	Required	Description
			on VPCId and VSwitchId.

Return parameters

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

2.6.6 Release an Internet connection string

Description

Release an Internet connection string of an instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: ReleaseInstancePublicConnection .
DBInstanceId	String	Yes	Instance ID.
CurrentConnectionString	String	Yes	Internet connection string.

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=DeleteDBInstance
&DBInstanceId=rdsaiiabnaiiabn
```

```
&<[Public request parameters]>
```

Response example

XML format

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

JSON format

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

2.6.7 Apply for an intranet connection string (Originally, switch between the intranet and Internet)

Description

You can switch between intranet and Internet when necessary. Specifically, an intranet instance can be switched to Internet, and vice versa. After switching, the connection address changes. You must modify the connection address in the code and restart the application.

The following conditions must be met, otherwise the modification will fail:

- The instance is running.
- There are less than 20 switching times within 24 hours.
- The [access mode](#) and [instance type](#) of an instance determine the address types.

Series	Version	Access mode	Connection address
Basic Edition	• MySQL 5.7 • SQL Server 2012	Standard mode	• Intranet address • Internet address • Intranet and Internet addresses
High-Availability Edition	• MySQL 5.5/5.6 • SQL Server 2008 R2 • PostgreSQL 9.4 • PPAS 9.3	Standard mode	• Intranet address • Internet address
		Safe connection mode	• Intranet address • Internet address • Intranet and Internet addresses
Finance Edition	MySQL 5.6	Standard mode	• Intranet address

Series	Version	Access mode	Connection address
			Internet address
		Safe connection mode	- Intranet address - Internet address - Intranet and Internet addresses

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: SwitchDBInstanceNetType .
DBInstanceId	String	Yes	Instance ID.
ConnectionStringPrefix	String	Yes	Prefix for new user connections to the database. It must be unique and meet the following requirements. - Consist of lower-case letters, digits, and underscores; - Start with a letter; - Cannot exceed 30 characters.
Port	Integer	No	Port ID. Value range: 3001-3999.

Return parameters

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

2.7 Log management

2.7.1 View the slow log list

Description

Query a summary of slow queries for a database under a user instance in a certain time range , and this operation supports querying by page. Slow queries return different SQLSlowLog parameter values for the SQL Server and MySQL instances. For details, see the SQLSlowLog parameter table below.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: DescribeSlowLogs .
DBInstanceId	String	Yes	Instance ID.
StartTime	String	Yes	Query start date. Format: YYYY-MM-DDZ, for example, 2011-05-30Z.
EndTime	String	Yes	Query end date, which cannot be earlier than the query start date . Format: YYYY-MM-DDZ, for example, 2011-05-30Z.
DBName	String	No	Name of a database.
SortKey	String	No	Sorting basis. Values are as follows: TotalExecutionCounts: sorting in the descending order of execution times;

Name	Type	Required?	Description
			• TotalQueryTimes : sorting in the descending order of the total execution duration; • TotalLogicalReads : sorting in the descending order of the total number of logical reads; • TotalPhysicalReads : sorting in the descending order of the total number of physical reads . This parameter is effective for SQL Server instances and must be used for SQL Server instances.
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 details, see Public parameters .
Engine	String	Database type.

Name	Type	Description
StartTime	String	Query start date. Format: YYYY-MM-DDZ, for example, 2011-05-30Z.
EndTime	String	Query end date. Format: YYYY-MM-DDZ, for example, 2011-05-30Z.
TotalRecordCount	Integer	Total number of records.
PageNumber	Integer	Page number.
PageRecordCount	Integer	Number of SQL statements displayed on the current page.
Items	List<SQLSlowLog>	

SQLSlowLog parameters for MySQL

Name	Type	Description
DBName	String	Name of a database.
SQLText	String	Query statement.
MySQLTotalExecutionCounts	Long	Total number of execution times.
MySQLTotalExecutionTimes	Long	Total execution duration, in the unit of seconds.
MaxExecutionTime	Long	Maximum execution duration, in the unit of seconds.
TotalLockTimes	Long	Total lock duration, in the unit of seconds.
MaxLockTime	Long	Maximum lock duration, in the unit of seconds.
ParseTotalRowCounts	Long	Total number of parsed rows.
ParseMaxRowCount	Long	Maximum number of parsed rows.
ReturnTotalRowCounts	Long	Total number of returned rows.
ReturnMaxRowCount	Long	Maximum number of returned rows.

Name	Type	Description
CreateTime	String	Data generation date. Format : “yyyy-MM-ddZ”, for example, 2011-05-30Z.

SQLSlowLog for SQL Server

Name	Type	Description
SQLText	String	Query statement.
SQLServerTotalExecutionCounts	Long	Total number of execution times.
SQLServerTotalExecutionTimes	Long	Total execution duration, in the unit of milliseconds.
TotalLogicalReadcounts	Long	Total number of logical reads.
TotalPhysicalReadcounts	Long	Total number of physical reads.
ReportTime	String	Data report generation date. Format: “yyyy-MM-ddZ”, for example, 2011-05-30Z.

Request example

```
https://rds.aliyuncs.com/?Action=DescribeSlowLogs
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&StartTime=2011-06-11Z
&EndTime=2011-12-11Z
&SortKey= TotalExecutionCounts
&<Public Request Parameters>
```

Response example

XML format:

```
<DescribeSlowLogsResponse>
  <RequestId>A5409D02-D661-4BF3-8F3D-0A814D0574E7</RequestId>
  <DBInstanceId>riauvjz6zajfiq6ba1370329449201</DBInstanceId>
  <Engine>SQLServer</Engine>
  <StartTime>2011-06-11Z</StartTime>
  <EndTime>2011-12-11Z</EndTime>
  <TotalRecordCount>1</TotalRecordCount>
  <PageNumber>1</PageNumber>
  <PageRecordCount>1</PageRecordCount>
  <Items>
    <SQLSlowLog>
      <SQLText>update test.zxb set id=0 limit 1</SQLText>
      <SQLServerTotalExecutionCounts>178</SQLServerTotalExecutionCounts>
      <SQLServerTotalExecutionTimes>189</SQLServerTotalExecutionTimes>
```

```

    <TotalLogicalReadcounts>89</TotalLogicalReadcounts>
    <TotalPhysicalReadcounts>90</TotalPhysicalReadcounts>
    <ReportTime>2013-11-12Z</ReportTime>
  </SQLSlowLog>
</Items>
</DescribeSlowLogsResponse>

```

JSON format:

```

{
  "RequestId": "A5409D02-D661-4BF3-8F3D-0A814D0574E7",
  "StartTime": "2011-06-11Z ",
  "EndTime": "2011-12-11Z ",
  "Engine": "SQLServer",
  "PageNumber": 1,
  "PageRecordCount": 1,
  "TotalRecordCount": 1,
  "Items": [
    { "SQLSlowLog": [
      {
        "SQLText": "update test.zxb set id=0 limit 1"
        "SQLServerTotalExecutionCounts": 178
        "SQLServerTotalExecutionTimes": 189
        "TotalLogicalReadcounts": 89
        "TotalPhysicalReadcounts": 90
        "ReportTime": "2013-11-12Z "
      }
    ]
    }
  ]
}

```

2.7.2 View slow log details

Description

Query slow log details for an instance in a certain time range. MySQL, PostgreSQL, and PPAS instances are supported.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: DescribeSlowLogRecords
DBInstanceId	String	Yes	Instance ID.
StartTime	String	Yes	Query start date. Format: YYYY-MM-DD'T'HH:mmZ, for example, 2011-06-11 T15:00Z.

Name	Type	Required	Description
EndTime	String	Yes.	Query end date, which cannot be earlier than the query start date . Format: YYYY-MM-DD'T'HH:mmZ, for example, 2011-06-11 T16:00Z.
DBName	String	No	Name of a database.
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.

Response parameters

Name	Type	Description
<Common response parameters>		Fore more information, see Public parameters .
Engine	String	Database type.
TotalRecordCount	Integer	Total number of records.
PageNumber	Integer	Page number.
PageRecordCount	Integer	Number of SQL statements displayed on the current page.
Items	List<SQLSlowRecord>	

SQLSlowLog parameters

Name	Type	Description
HostAddress	String	Host address used for database connection.
DBName	String	Name of a database.

Name	Type	Description
SQLText	String	Query statement.
QueryTimes	Long	Execution duration, in the unit of seconds.
LockTimes	Long	Lock duration, in the unit of seconds.
ParseRowCounts	Long	Number of parsed rows.
ReturnRowCounts	Long	Number of returned rows.
ExecutionStartTime	String	Execution start time. Format: YYYY-MM-DD'T'HH:mm:ss Z, for example, 2011-06-11 T15:00:08Z.

Request example

```
https://rds.aliyuncs.com/?Action=DescribeSlowLogRecords
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&StartTime=2011-06-11T15:00Z
&EndTime=2011-06-11T16:00Z
&<Common request parameters>
```

Response example

XML format

```
<DescribeSlowLogRecordsResponse>
  <RequestId>542BB8D6-4268-45CC-A557-B03EFD7AB30A</RequestId>
  <DBInstanceId>riauvjz6zajfiq6ba1370329449201</DBInstanceId>
  <Engine>MySQL</Engine>
  <TotalRecordCount>1</TotalRecordCount>
  <PageNumber>1</PageNumber>
  <PageRecordCount>1</PageRecordCount>
  <Items>
    <SQLSlowRecord>
      <HostAddress>192.168.0.123</HostAddress>
      <DBName>test</DBName>
      <SQLText>update test.zxb set id=0 limit 1</SQLText>
      <QueryTimes>123</QueryTimes>
      <LockTimes>12</LockTimes>
      <ParseRowCounts>125</ParseRowCounts>
      <ReturnRowCounts>1</ReturnRowCounts>
      <ExecutionStartTime>2011-06-11T15:00:08Z</ExecutionStartTime>
    </SQLSlowRecord>
  </Items>
</DescribeSlowLogRecordsResponse>
```

JSON format

```
{
```

```

"RequestId": "542BB8D6-4268-45CC-A557-B03EFD7AB30A"
"Engine": "MySQL",
"PageNumber": 1,
"PageRecordCount": 1,
"TotalRecordCount": 1
"Items":
{
  "SQLSlowRecord":
  [
    {
      HostAddress: "192.168.0.123"
      DBName: "test"
      SQLText: " update test.zxb set id=0 limit 1"
      QueryTimes: "123"
      LockTimes: "12"
      ParseRowCounts: "125"
      ReturnRowCounts: "1"
      ExecutionStartTime: "2011-06-11T15:00:08Z"
    }
  ]
}

```

2.7.3 View error logs

Description

View the error logs generated for an instance in a certain time range.

Request parameters

Name	Type	Required	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

Name	Type	Required	Description
			: 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.
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=riauvjz6zajfiq6ba1370329449201
&StartTime=2011-06-11T15:00Z
&EndTime=2011-06-11T20:00Z
```

&<Public Request Parameters>

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"
      }
    ]
  }
}
```

2.7.4 View binlogs

Description



Note:

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

Query the binlog files of an instance, supporting querying by page. RDS provides binlog file downloads.

- When the DownloadLink is NULL, this indicates that RDS has not provided 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>50D9768CA801C2F102005C70</RequestId>
<HostId>oss-test.aliyun-inc.com</HostId>
</Error>
```

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: DescribeBinlogFiles .
DBInstanceId	String	Yes	Instance ID.
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 .

Name	Type	Description
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, in the unit of bytes.
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, no download URL exists.
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=riauvjz6zajfiq6ba1370329449201
&StartTime=2011-06-11T15:00:00Z
&EndTime=2013-06-05T15:00:00Z
```

&<Public request parameters>

Response example

XML format

```
<DescribeBinlogFilesResponse>
  <RequestId>66816822-CEC1-4C8D-AB26-2530A7D4DCA5</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/custins477
42/hostins46770/mysql-bin. 000120.zip?spm=0.0.0.0.eMQKjs&OSSAccessK
eyId=c9gzsqpauj3duw5whwdv40hb&Expires=1384916927&Signature=07TMgM3G2J
w4s006yN8nWDgBJPA%3D</DownloadLink>
      <LinkExpiredTime>2013-06-09T18:00:00Z</LinkExpiredTime>
    </BinLogFile>
  </Items>
</DescribeBinlogFilesResponse>
```

JSON format

```
{
  "RequestId": "66816822-CEC1-4C8D-AB26-2530A7D4DCA5"
  "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/custins47742/
hostins46770/mysql-bin. 000120.zip?spm=0.0.0.0.eMQKjs&OSSAccessKeyId
=c9gzsqpauj3duw5whwdv40hb&Expires=1384916927&Signature=07TMgM3G2J
w4s006yN8nWDgBJPA%3D"
        LinkExpiredTime: "2013-06-09T18:00:00Z"
      }
    ]
  }
}
```

2.7.5 Query whether SQL audit is enabled

Description

Query whether SQL collection is enabled for the specified RDS instance.

Request parameters

Name	Type	Required	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.

2.7.6 ModifySQLCollectorPolicy

Description

Enable or disable SQL collection for the specified RDS instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: ModifySQLCollectorPolicy .
DBInstanceid	String	Yes	Instance ID.
SQLCollectorStatus	String	Yes	- Enabled: SQL collection is enabled - Disabled: SQL collection is disabled.

Return parameters

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

2.7.7 Query SQL audit logs

Description

Query the SQL audit logs generated for an instance.

Request parameters

Name	Type	Required?	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.
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 DescribeSQLLogFileInterface 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.

Name	Type	Required?	Description
			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.
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>	None.

SQLRecord parameters

Name	Type	Description
DBName	String	Name of a database.
AccountName	String	Name of an account.

Name	Type	Description
HostAddress	String	Client IP address.
SQLText	String	SQL statement.
TotalExecutionTimes	Long	Time consumed, in the unit of microseconds.
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
&<Public Request Parameters>
```

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,
  "ItemsCounts":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"
}
```

2.7.8 Query the SQL audit file list

Description

Query the SQL audit file list.

Request parameters

Name	Type	Required	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>	Array consisting of audit files.

LogFile parameters

Name	Type	Description
FileID	Integer	ID of a file.

Name	Type	Description
DBInstanceId	String	Instance ID.
LogStatus	String	Success: archiving completed : Failed: archiving failed ; Generating: archiving underway.
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, in the unit of bytes.

2.8 Backup and recovery

2.8.1 Create backup

Description

Create backups. Up to 10 backups can be created for an instance in a single day. The following conditions must be met, otherwise backup creation will fail:

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

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: CreateBackup .
DBInstanceId	String	Yes	Instance ID.
BackupMethod	String	No	• Logical: logical backup.

Name	Type	Required?	Description
			- Physical: physical backup. - The default value is Physical. Logical backup does not support instances without databases. - SQL Server only supports physical backup.
BackupStrategy	String	No	Range of logical backup. - db: single-database backup. - instance: instance backup. - This parameter is valid only when BackupMethod is Logical.
DBName	String	No	Name of the database for single-database logical backup. This parameter is valid only when BackupMethod is Logical and BackupStrategy is db.
BackupType	String	No	- Auto: determines whether it is a full backup or an incremental backup through automatic calculation. - FullBackup: indicates a full backup. The default value is Auto.

Return parameters

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

Request example

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

Response example

XML format:

```
<CreateBackupResponse>
  <RequestId>DA147739-AEAD-4417-9089-65E9B1D8240D</RequestId>
</CreateBackupResponse>
```

JSON format:

```
"RequestId": "DA147739-AEAD-4417-9089-65E9B1D8240D"
```

2.8.2 Clone RDS instances

Description

A new instance with the historical data is cloned based on the backup file of an existing instance or a specified time. The new instance has the same whitelist settings, SQL audit settings, threshold value alarm settings, backup settings, and parameter settings as the existing instance. The data in the new instance is the same as the historical data in the backup file.

Currently, the clone feature is only applicable to MySQL engines. The database account information in an instance is cloned as follows:

- If the account for the master instance has a high level of permissions, the cloned instance carries the account information with the same permission level.
- If the account for the master instance has normal permissions, the cloned instance carries the historical account information in the used backup file or at the specified time.

When creating a clone instance, the master instance must meet the following conditions:

- The instance is running and not locked.
- The instance does not have an ongoing migration task.

- Data backup and log backup are enabled.
- To clone an instance by using a backup set, the master instance must have at least one backup set.

**Note:**

To create a clone instance with a sub-account, ensure that you have authorized the sub-account. For more information, see [Authorization for RDS instances](#).

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter; value: CloneDBInstance
DBInstanceid	String	Yes	Instance ID
BackupId	String	No	• Backup set ID, which is obtained through DescribeBackups, the interface for backup list query. • Either BackupId or RestoreTime is required.
RestoreTime	String	No	• The arbitrary time specified by user during the backup retention period, for example, 2011-06-11T16:00:00Z. • Either BackupId or RestoreTime is required.
PayType	String	Yes	Billing method. Values: • Postpaid – post-payment instance; • Prepaid – pre-payment instance.

Name	Type	Required	Description
Period	String	No	- This input parameter is required if PayType is set to Subscription. - The pre-payment methods include: - Year: yearly subscription - Month: monthly subscription
UsedTime	String	No	Subscription type. - This input parameter is required if PayType is set to Prepaid. - This parameter indicates the duration for purchase, which can be 1, 2, 3, or other numeric values as required.
DBInstanceClass	String	No	- Instance type. For more information, see Instance type list - This parameter is optional. If it is not input, the new instance and the master instance are the same type.
DBInstanceStorage	String	No	Disk space, measured in GB. By default, the disk space for the new instance is the same as that for

Name	Type	Required	Description
			the master instance . The parameter value is increased at a step of 5 GB. - For RDS instances with exclusive storage space on a physical machine , the parameter value range is [3000, 3000]. - For other instance types, the parameter value range is [5, 2000].
InstanceNetworkType	String	No	Network type. Values: - Classic – to create a classic instance. - VPC – to create a VPC instance. - By default, the new instance and the master instance have the same network type.
VPCId	String	No	VPC ID
VSwitch ID	String	No	VSwitch ID
PrivateIpAddress	String	No	IP address of a VPC under VSwitchId. If no value is set, the system automatically assigns a VPC IP address.

Return parameters

Name	Type	Description
<Common response parameters>	None	For more information, see Public parameters .
DBInstanceId	None	Instance ID.
OrderId	None	Order ID.

2.8.3 View the backup list

Description

Query a set of instance backups. The set of backups must be in the Success state to be used to restore an instance.

RDS provides backup files for download.

- When the DownloadLink is NULL, RDS does not provide a download URL.
- When DownloadLink is not NULL, the user 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.

Name	Type	Required	Description
BackupId	Integer	No	ID of the backup set.
BackupStatus	String	No	Backup set status. Values: • Success: the backup is finished. • Failed: the backup fails.
BackupMode	String	No	Backup mode. Values: • Automated: a common task. • Manual: a temporary task.
StartTime	String	Yes	Query start time, for example, 2011-06-11T15:00Z.
EndTime	String	Yes	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.

Name	Type	Description
PageNumber	Integer	Page number.
PageRecordCount	Integer	Number of backup sets displayed on the current page.
Items	List<Backup>	Array 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 the backup set.
BackupStatus	String	Backup status. Values: - 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. Values: - FullBackup - IncrementalBackup
BackupMode	String	Backup mode. Values: - Automated - Manual
BackupMethod	String	Backup method. Values: Logical

Name	Type	Description
		Physical
BackupDownloadURL	String	Download URL. The string is empty if the current backup cannot be downloaded.
BackupIntranetDownloadURL	String	Download URL. The string is empty if the current backup cannot be downloaded.
BackupSize	Long	Data file size, in the unit of bytes.
Storestitas	String	Data backup storage status: - Enabled - Disabled

2.8.4 Create a temporary instance

Description

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, otherwise creation will fail:

- The instance status 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?	Description
Action	String	Yes	Required parameter. Value: CreateTempDBInstance .
DBInstanceId	String	Yes	Instance ID.
BackupId	Integer	Yes	ID of the backup.

Name	Type	Required?	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=riauvjz6zajfiq6ba1370329449201
&<Public Request Parameters>
```

Response example

XML format:

```
<CreateChildDBInstanceResponse>
  <RequestId>248DE93F-8647-4B9D-8287-4A4A0FE56AD5</RequestId>
  <TempDBInstanceId>sub1385954257106_junjunzhaasadsd</TempDBInstanceId>
</CreateChildDBInstanceResponse>
```

JSON format:

```
"RequestId": "248DE93F-8647-4B9D-8287-4A4A0FE56AD5",
```



```
"TempDBInstanceId": "sub1385954257106_junjunzhaasadsd"
```

2.8.5 View the backup policy

Description

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?	Description
Action	String	Yes	Required parameter. Value: DescribeBackupPolicy .
DBInstanceId	String	Yes	Instance ID.

Return parameters

Name	Type	Description
<Public Return Parameters>	None	For more information, see ### .
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.
PreferredBackupPeriod	String	Backup period. Values: - Monday - Tuesday - Wednesday - Thursday - Friday - Saturday - Sunday
BackupLog	String	The default value is Enable. You can change it to Disabled. - Enabled - Disabled

Name	Type	Description
LogBackupRetentionPeriod	String	Retention days of the backup (7 to 730 days). The default value is 7 days.

2.8.6 Modify the backup policy

Description

Modify the backup policy. The RDS system periodically backs up instances according to the user-defined system configuration.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: ModifyBackupPolicy .
DBInstanceId	String	Yes	Instance ID.
PreferredBackupTime	String	Yes	Backup time, in the format of HH:mmZ- HH:mm Z.
PreferredBackupPeriod	String	Yes	Backup period. Values: - Monday - Tuesday - Wednesday - Thursday - Friday - Saturday - Sunday
BackupRetentionPeriod	String	No	Retention days of the backup (7 to 730 days). The default value is 7 days.

Name	Type	Required	Description
BackupLog	String	No	The default value is Enable. You can change it to Disabled.
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
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&PreferredBackupTime=00:00Z-01:00Z
&PreferredBackupPeriod=Monday
&<Public Request Parameters>
```

Return example

XML format

```
<CreateBackupResponse>
  <RequestId>DA147739-AEAD-4417-9089-65E9B1D8240D</RequestId>
```

```
</CreateBackupResponse>
```

JSON format

```
{
    "RequestId": "DA147739-AEAD-4417-9089-65E9B1D8240D"
}
```

2.8.7 Recover a backup set to an instance

Description

Restore the backup set to an instance by overwriting the instance. The following conditions must be met, otherwise operation will fail:

- The instance status 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	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=rds91e395totd54461k3
```

```
&<Public Request Parameters>
```

Response example

XML format

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

JSON format

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

2.8.8 Delete data backup files

Description

This API is used to delete the data backup files whose storage time is more than 7 days and longer than the log backup retention period. For more information, see [#unique_169](#).

This API only deletes the specified backup sets for the target instance. It does not delete the backup sets for the associated instances, such as read-only, disaster recovery, or cloned instances.

The following conditions must be met:

- The target instance is running.
- The instance engine is MySQL, PostgreSQL, or PPAS.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Name of the interface. Set this parameter to DeleteBackup .
DBInstanceId	String	Yes	Instance ID.
BackupId	String	Yes	Backup set ID, which can be obtained using DescribeBackups . You can enter up to 100 backup set IDs at a time. Separate them with commas (.). You can only delete the

Name	Type	Required	Description
			backup sets whose DescribeBackups is Enabled. To query the Store Status, DescribeBackups.

Return parameters

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

Request example

Response example

2.9 Migrate SQL Server to the cloud

2.9.1 Create a task of migrating data to RDS

Description

This API restores the 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	Description
Action	String	Yes	API of the action , system required parameter. Set this parameter to CreateMigrateTask.
DBInstanceId	String	Yes	Instance ID.
DBName	String	Yes	Database name.
BackupMode	String	Yes	Task type. Currently, this parameter can

Parameter	Type	Required	Description
			only be set to FULL. Optional values: - FULL: One-time full backup file migration. - DIFF: One-time incremental backup file migration. - LOG: Repeated incremental backup file migration.
IsOnlineDB	String	Yes	Whether to bring the restored database online for user access . Optional values : 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 the 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.

Parameter	Type	Description
TaskId	String	Task ID.
MigrateTaskId	String	ID of the migration task.
BackupMode	String	Task type. Currently, this parameter can only be set to FULL. Optional values: • FULL: One-time full backup file migration. • DIFF: One-time incremental backup file migration. • LOG: Multiple migrations of incremental backup files.

2.9.2 Get the task list of migrating data to RDS

Description

This API gets the task records of migrating data to an RDS instance over 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	Description
Action	String	Yes	Name of the interface. Value: DescribeMigrateTasks .
DBInstanceId	String	Yes	Name of an RDS instance, for example, rm-xetesting.
StartTime	String	No	Start time, for example , 2017-10-20T01:00Z.
EndTime	String	No	End time, for example , 2017-10-25T01:00Z

Name	Type	Required	Description
			. 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 'T' HH:mm:ssZ, for example, 2017-05-30 T12:11:4Z .

Parameter	Type	Description
EndTime	String	End time of the migration task, in the format of YYYY-MM-DD 'T' HH:mm:ssZ, for example, 2017-05-30 T12:11:4Z .
IsDBReplaced	String	Whether the migration overwrites existing data. Currently, only the value True can be returned. Optional values: - False: Existing data is not overwritten. - True: Existing data is overwritten.
Status	String	Migration status. Optional values: - NoStart: Migration not started. - Running: Migration in progress. - Success: Migration successful. - Failed: Migration failed. - Waiting: Waiting to migrate incremental backup files.
BackupMode	String	Data migration task type. Currently, only the value FULL can be returned. Optional values: - FULL: One-time full backup file migration. - DIFF: One-time incremental backup file migration.

Parameter	Type	Description
		LOG: Multiple migration tasks of incremental backup files.
Description	String	Description about the migration task.

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

Description

This API queries 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	Description
Action	String	Yes	Name of the API. Value: DescribeOssDownloads .
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 FULL can be returned. Optional values: • FULL: One-time full backup file migration. • DIFF: One-time incremental backup file migration. • LOG: Multiple migrations of incremental backup files.
FileSize	String	Size of the backup file, in MB.
Status	String	File status. Optional values: • NoStart: Download not started. • Downloading: Download in progress. • Finished: Download completed. • DownloadFailed: Download failed. • VerifyFailed: MD5 verification failed. • Deleted: Already deleted. • DeleteFailed: Deletion failed. • CheckSuccess: Check successful. • CheckFailed: Check failed. • Restoring: Restore in progress.

Parameter	Type	Description:
		- Restored: Restore successful. - RestoreFailed: Restore failed.
IsAvailable	String	Availability status. Optional values: - False: Unavailable. - True: Available.
Description	String	File description.

2.10 Monitoring management

2.10.1 View instance resource usage

Description

View the resource usage information of an instance. After the interface is called, the system returns the size of the space occupied by a certain instance to the user. DBInstanceId is used to retrieve instance resource usage information.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: DescribeResourceUsage .
DBInstanceId	String	Yes	Instance ID.

Return parameters

Name	Type	Description
<Public return parameter>	None	For more information, see Public parameters .
DBInstanceId	String	Instance ID.
Engine	String	Database type.

Name	Type	Description
DiskUsed	Integer	Space used (DataSize+LogSize). Unit: byte. -1 indicates no data.
DataSize	Integer	Space occupied by data files. Unit: byte. -1 indicates no data.
LogSize	Integer	Space occupied by logs. Unit: byte. -1 indicates no data.
BackupSize	Integer	Space occupied by backups. Unit: byte. -1 indicates no data.
ColdBackupSize	Integer	Size of the cold backup. Unit: byte. -1 indicates no data.
SQLSize	Integer	SQL size. Unit: byte. -1 indicates no data.

2.10.2 View instance performance data

Description

View the performance metric data for a user instance in a certain time period based on performance parameters. There are three output formats based on different query time ranges:

- When the query time range is less than or equal to 1 day, performance values are shown by minute.



Note:

When the instance's space usage key is MySQL_SpaceUsage or SQLServer_SpaceUsage, performance metric data can be queried only if the time range is up to 1 day.

- Queries with time ranges from 1 to 7 days are not supported at the moment.
- When the query time range is greater than 7 days and less than or equal to 15 days, performance values are shown by hour.
- Queries with time ranges greater than 15 days and less than 30 days are not supported at the moment.
- When the query time range is greater than or equal to 30 days and less than or equal to 1 year, performance values are shown by day.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter . Value: DescribeDB InstancePerformance.
DBInstanceid	String	Yes	Instance ID.
Key	Integer	Yes	Performance indicator . Multiple indicators are separated with the English “,”. See the performance parameters table.
StartTime	String	Yes	Query start time, for example, 2012-06- 11T15:00Z.
EndTime	String	Yes	Query end time, for example, 2012-06- 11T15:00Z.

Return parameters

Name	Type	Description
<Public Return Parameters>	None	For more information, see Public parameters.
DBInstanceid	String	Instance ID.
Engine	String	Database type.
StartTime	String	Query start time. Format: YYYY-MM-DD'T'HH:mmZ, for example, 2011-05-30T03:29Z.
EndTime	String	Query end time, which must be later than the query start time . Format: YYYY-MM-DD'T'HH

Name	Type	Description
		:mmZ, for example, 2011-05-30T03:29Z.
PerformanceKeys	List<PerformanceKey>	Format of the array: {perf1, perf2, perf3, ...}.

PerformanceKey parameters

Name	Type	Description
Key	String	Performance parameter.
Unit	String	Display unit.
ValueFormat	String	Value format. 1. If it is null, VALUE is a final value. 2. If it is not null, VALUE needs to be resolved and separated with "&", for example, com_delete&com_insert&com_insert_select&com_replace
Values	List<PerformanceValue>	Format of the array: {value1, value2, ...}

PerformanceValue parameters

Name	Type	Description
Value	String	Performance value
Date	String	Calculation date. Format: "yyyy-MM-dd'T'HH:mm:ssZ", for example, 2011-05-30T03:29:00Z

Request example

```
https://rds.aliyuncs.com/?Action=DescribeDBInstancePerformance
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&key= MySQL_NetworkTraffic
&StartTime=2013-01-11T15:00:00Z
&EndTime=2013-06-05T15:00:00Z
```


&<Public Request Parameters>

Return example

XML format:

```
<DescribeDBInstancePerformanceResponse>
  <RequestId>A5409D02-D661-4BF3-8F3D-0A814D0574E7</RequestId>
  <DBInstanceId>riauvjz6zajfiq6ba1370329449201</DBInstanceId>
  <StartTime>2013-01-11T15:00:00Z</StartTime>
  <EndTime>2013-10-17T15:00Z</EndTime>
  <Engine>MySQL</Engine>
  <PerformanceKeys>
    <PerformanceKey>
      <Key>MySQL_NetworkTraffic</Key>
      <Unit>KB</Unit>
      <ValueFormat>recv_k&sent_k</ValueFormat>
      <Values><Values/>
    </PerformanceKey>
  </PerformanceKeys>
</DescribeDBInstancePerformanceResponse>
```

JSON format:

```
"RequestId" "A5409D02-D661-4BF3-8F3D-0A814D0574E7",
"DBInstanceId": "riauvjz6zajfiq6ba1370329449201",
"StartTime": "2012-06-11T15:00Z",
"EndTime": "2013-10-17T15:00Z",
"Engine": "MySQL",
"PerformanceKeys": {
  PerformanceKey[
    "Key": "MySQL_NetworkTraffic",
    "Unit": "KB",
    "ValueFormat": "recv_k&sent_k",
    "Values": {
      "PerformanceValue": []
    }
  ]
}
```

2.10.3 Query monitoring behaviors

Description

Describes monitoring behaviors

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: DescribeDBInstanceMonitor .

Name	Type	Required	Description
DBInstanceId	String	Yes	DBInstanceId

Return parameters

Name	Type	Description
<Public Return Parameters>		For more information, see Public parameters.
Period	String	Monitoring period, in the unit of seconds.

2.10.4 Modify monitoring behaviors

Description

Modify monitoring behaviors

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: ModifyDBInstanceMonitor .
DBInstanceId	String	Yes	Instance ID.
Period	String	Yes	Monitoring period. Values: 60s and 300s. Default value: 300s.

Return parameters

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

2.11 Parameter management

2.11.1 View database parameter templates

Description

The interface returns a list of parameter templates. The list includes parameter names, default parameter values, whether or not they can be modified, whether the database must be restarted for them to take effect, and the parameter validation rules (regular expressions).

**Note:**

This API is only applicable to MySQL and SQL Server instances.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: DescribeParameterTemplates .
Engine	String	Yes	Database type, values: MySQL and SQLServer.
EngineVersion	String	Yes	Database version. For MySQL databases: 5.1, 5.5, or 5.6. For SQL Server databases : 2008r2, 2012_web, 2016_web.

Return parameters

Name	Type	Description
<Public Return Parameters>		For more information, see Public parameters .
Engine	String	Database type.
EngineVersion	String	Database version.

Name	Type	Description
ParameterCount	Integer	Number of parameters.
Parameters	List<TemplateRecord>	Parameter list. Format: { parameter1, parameter2, parameter3, ... }.

TemplateRecord parameters

Name	Type	Description
ParameterName	String	Parameter name.
ParameterValue	String	Default parameter value.
ForceModify	String	False: Default parameter values cannot be modified. True: Default parameter values can be modified.
ForceRestart	String	- False: The modification takes effect immediately. - True: The modification takes effect after the database is restarted.
CheckingCode	String	Check code. The available range for a parameter and a regular expression.
ParameterDescription	String	Parameter description.

Request example

```
https://rds.aliyuncs.com/?Action=DescribeParameterTemplates
&Engine=SQLServer
&EngineVersion=2008r2
&<Public Request Parameters>
```

Response example

XML format

```
<DescribeParameterTemplatesResponse>
  <Engine>mssql</Engine>
  <EngineVersion>2008r2</EngineVersion>
  <ParameterCount>1</ParameterCount>
  <Parameters>
    <TemplateRecord>
      <CheckingCode>[0-100]</CheckingCode>
      <ForceRestart>True</ForceRestart>
```

```

    <Factor>1</Factor>
    <ParameterDescription> This option sets the default fill factor
    value for the server range. A fill factor is provided to optimize
    index data storage and performance. </ParameterDescription>
    <ParameterName>fill factor</ParameterName>
    <ParameterValue>0</ParameterValue>
    <ForceModify>True</ForceModify>
    <Unit>INT</Unit>
  </TemplateRecord>
</Parameters>
<RequestId>7B96585A-0FF2-4979-8FE5-7D147A29FDC0</RequestId>
</DescribeParameterTemplatesResponse>

```

JSON format

```

{
  "Engine": "mssql",
  "EngineVersion": "2008r2",
  "ParameterCount": 1
  "Parameters": {
    "TemplateRecord": [
      {
        "ParameterDescription": "This option sets the default
        fill factor value for the server range. A fill factor is provided to
        optimize index data storage and performance.",
        "ForceRestart": "True",
        "CheckingCode": "[0-100]"
        "Factor": "1"
        "ParameterName": "fill factor"
        "ParameterValue": "0"
        "ForceModify": "True"
        "Unit": "INT"
      }
    ]
  },
  "RequestId": "7B96585A-0FF2-4979-8FE5-7D147A29FDC0"
}

```

2.11.2 View the list of currently running instance database parameters

Description

This interface returns an instance's current parameter configuration to the user.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: DescribeParameters .
DBInstanceId	String	Yes	Instance ID.

Return parameters

Name	Type	Description
<Public Return Parameters>	None	For details, see Public parameters .
Engine	String	Database type.
EngineVersion	String	Database version.
RunningParameters	List<DBInstanceParameter>	A list of currently running parameters, in the format of {parameter1,parameter2,parameter3, ...}.
ConfigParameters	List<DBInstanceParameter>	A list of parameters being synchronized, in the format of {parameter1,parameter2,parameter3,...}.

DBInstance parameters

Name	Type	Description
ParameterName	String	Parameter name.
ParameterValue	String	Parameter value.
ParameterDescription	String	Parameter description.

Request example

```
https://rds.aliyuncs.com/?Action=DescribeParameters
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&<Public Request Parameters>
```

Response example

XML format:

```
< DescribeParametersResponse>
  <RequestId>2A748162-8040-4D6B-813E-6910C8C033F1</RequestId>
  <Engine>mssql</ Engine >
  <EngineVersion>2008r2</ EngineVersion >
  <RunningParameters>
    <DBInstanceParameter>
      <ParameterDescription> This option sets the default fill factor
value for the server range. A fill factor is provided to optimize
index data storage and performance </ParameterDescription>
      <ParameterName>fill factor</ParameterName>
      <ParameterValue>0</ParameterValue>
    </DBInstanceParameter>
  </RunningParameters>
```

```
<ConfigParameters>
  <DBInstanceParameter>
    <ParameterDescription> This option sets the default fill factor
    value for the server range. A fill factor is provided to optimize
    index data storage and performance </ParameterDescription>
    <ParameterName>fill factor</ParameterName>
    <ParameterValue>50</ParameterValue>
  </DBInstanceParameter>
</ConfigParameters>
</DescribeParametersResponse>
```

JSON format:

```
{
  "ConfigParameters": {
    "DBInstanceParameter": [
      {
        "ParameterDescription": "This option sets the default
fill factor value for the server range. A fill factor is provided to
optimize index data storage and performance.",
        "ParameterName": "fill factor",
        "ParameterValue": "50"
      }
    ]
  },
  "Engine": "mssql",
  "EngineVersion": "2008r2",
  "RunningParameters": {
    "DBInstanceParameter": [
      {
        "ParameterDescription": "This option sets the default
fill factor value for the server range. A fill factor is provided to
optimize index data storage and performance.",
        "ParameterName": "fill factor",
        "ParameterValue": "0"
      }
    ]
  },
  "RequestId": "2A748162-8040-4D6B-813E-6910C8C033F1"
}
```

2.11.3 Modify the database parameter list

Description

You can modify instance parameters. After submitting a request, the RDS assigns a task and the new parameter is applied to the instance. If any submitted parameter requires that the database be restarted, the RDS restarts the database. Instances must meet the following conditions, or the call may fail:

- The current instance status is Running.
- The current instance lock mode is Normal.

There are three types of parameter values:

- [1-65535]: indicates a numerical range. Regular identification is used to extract the minimum and maximum values. Then the input parameter is verified based on the minimum and maximum values. In addition, the parameter must be a multiple of a divisible factor.
- [utf8|gbk|latin1]: indicates a set value determination rule. Regular identification is used to extract the fixed value. Then the parameter is verified based on these fixed values.
- Others: a regular expression must apply.

Before the task is assigned, the RDS checks the parameter as follows:

- Whether the parameter exist.
- Whether the parameter can be modified.
- Whether the parameter is valid.

If the parameter is invalid, the RDS returns Error Code 400 and the information about the invalid parameter. For example:

```
{"HttpStatusCode":400,"Code":"InvalidParameter.Format",
"Message":"Specified parameter is not valid.[auto_increment_increment:
a,character_set_client:41]"}
```

Request parameters

Name	Type	Required?	Description
Action	String	Yes	required parameter. Value: ModifyParameter.
DBInstanceId	String	Yes	Instance ID.
Parameters	String	Yes	JSON string for the parameter and its value. The parameter value must be string-type. {"auto_increment_increment":"1", "character_set_client":"utf8"}.
Forcerestart	String	No	true: force restart (true must be input when a parameter among parameters to be modified needs to be restarted; otherwise, the modification is

Name	Type	Required?	Description
			invalid). False: force restart disabled. The force restart is disabled by default.

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=ModifyParameter
&DBInstanceId=riauvjz6zajfiq6ba1370329449201L
&Parameters={"auto_increment":"1","character_set_client":"gbk"}
&<Public Request Parameters>
```

Response example

XML format:

```
<ModifyParameterResponse>
  <RequestId>542BB8D6-4268-45CC-A557-B03EFD7AB30A</RequestId>
</ModifyParameterResponse>
```

JSON format:

```
{
  "RequestId": "542BB8D6-4268-45CC-A557-B03EFD7AB30A",
}
```

2.12 Data migration

2.12.1 Get a file upload address

Description



Note:

This API is only applicable to SQL Server instance.

Create the account and password for file server logon and the path information for files to be uploaded. The user can upload data files based on the preceding information. When the upload is

completed, the user can call the data import interface to migrate external data. The restrictions are as follows:

- Instance status: active.
- Database status: active.
- Up to 20 files can be created for a single database every day. A 24-hour period is considered as a single day. For example, if the last creation time was 2012-03-15 18:30:12, the next creation time must be later than 2012-03-16 18:30:12.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: CreateUploadPathForSQLServer
DBInstanceId	String	Yes	Instance ID.
DBName	String	Yes	Name of a database.

Response parameters

Name	Type	Description
<Public Return Parameters>		For more information, see Public parameters .
InternetFtpServer	String	File server on the Internet.
InternetPort	Integer	Port number on the file server on the Internet.
IntranetFtpServer	String	IP address of the server on the intranet.
IntranetPort	Integer	Port number on the server on the Intranet.
UserName	String	Account used to log on to the file server.
Password	String	Password used to log on to the file server.
FileName	String	File name, with the extension.

Example

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

```
&DBInstanceId=rianeurbfaeuq2u2a1370572118496
&DBName=testdb01
&<Public request parameters>
```

Response example

XML format

```
<CreateUploadPathForSQLServerResponse>
  <RequestId>66816822-CEC1-4C8D-AB26-2530A7D4DCA5</RequestId>
  <InternetFtpServer>10.230.239.1</InternetFtpServer>
  <InternetPort>3021</InternetPort>
  <IntranetFtpServer></IntranetFtpServer>
  <IntranetPort></IntranetPort>
  <UserName>MKEakJbyG</UserName>
  <Password>aT2Y_XN1GGnOLzm</Password>
  <FileName>testdb01_1370572475975.bak</FileName>
</CreateUploadPathForSQLServerResponse>
```

JSON format

```
"RequestId": "66816822-CEC1-4C8D-AB26-2530A7D4DCA5"
"InternetFtpServer": "10.230.239.1"
"InternetPort": 3021
"IntranetFtpServer": ""
"IntranetPort":
"UserName": "MKEakJbyG"
"Password": "aT2Y_XN1GGnOLzm"
"FileName": "testdb01_1370572475975.bak"
```

2.12.2 View the database file list

Description



Note:

This API is only applicable to SQL Server instances.

View the file list on the file server. You can use the “Getting a File Upload Address” interface to obtain the account required to upload files to the file server. RDS updates the data file status after data files are uploaded. The user can use the “Viewing the Database File List” interface to check whether data files are available. If files are available, the user can import data and obtain information about the import process.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: DescribeFilesForSQLServer .
DBInstanceid	String	Yes	Instance ID.
StartTime	String	Yes	Query start time, for example, 2011-06-11T15:00Z.
EndTime	String	Yes	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
DBInstanceid	String	Instance ID.
TotalRecordCount	Integer	Total number of records.
PageNumber	Integer	Page number.

Name	Type	Description
PageRecordCount	Integer	Number of SQL statements displayed on the current page.
Items	List<SQLServerUploadFile>	None.

SQLServerUploadFile parameters

Name	Type	Description
DBName	String	Name of a database.
FileName	String	Data file name, with the extension.
FileSize	Long	Data file size, in the unit of bytes.
InternetFtpServer	String	File server.
InternetPort	Integer	Port number on the file server.
IntranetFtpserver	String	IP address of the server on the intranet.
Intranetport	Integer	Port number on the server on the Intranet.
UserName	String	Account used to log on to the file server.
Password	String	Password used to log on to the file server.
FileStatus	String	File status. Values: - Unavailable - Available - NotStarted - Uploading - UploadFailed - Virus - Deleted - Success
CreationTime	String	FTP file generation time. Format: YYYY-MM-DD'T'HH:

Name	Type	Description
		mm:ssZ, for example, 2011-05-30 T12:11:4Z.

Request example

```
https://rds.aliyuncs.com/?Action=DescribeFilesForSQLServer
&DBInstanceId=rianeurbfaeuq2u2a1370572118496
&StartTime=2014-06-11T15:00Z
&EndTime=2014-06-11T16:00Z
&<Public Request Parameters>
```

Response example

XML format

```
< DescribeFilesForSQLServerResponse>
  <RequestId>08A3B71B-FE08-4B03-974F-CC7EA6DB1828</RequestId>
  <TotalRecordCount>1</TotalRecordCount>
  <PageNumber>1</PageNumber>
  <PageRecordCount>1</PageRecordCount>
  <Items>
    <SQLServerUploadFile>
      <DBName>testdb01</DBName>
      <FileName>testdb01_1370572475975.bak</FileName>
      <FileSize>1243435</FileSize>
      <InternetFtpServer>10.230.239.1</InternetFtpServer>
      <InternetPort>3021</InternetPort>
      <IntranetFtpServer></IntranetFtpServer>
      <IntranetPort></IntranetPort>
      <UserName>MKEakJbyG</UserName>
      <Password>aT2Y_XN1GGn0Lzm</Password>
      <FileStatus>Success</FileStatus>
      <CreationTime>2014-06-11T15:02:40Z</CreationTime>
    </SQLServerUploadFile>
  </Items>
</DescribeFilesForSQLServerResponse>
```

JSON format

```
"PageNumber":1,
"TotalRecordCount":1,
"PageRecordCount":1
"Items":
{"Maid ":
  "DBName":"testdb01"
  "FileName":"testdb01_1370572475975.bak"
  "FileSize ":"1243435"
    "InternetFtpServer ":"10.230.239.1"
    "InternetPort":3021
    "IntranetFtpServer":""
    "IntranetPort":
    "UserName":"MKEakJbyG"
    "Password":"aT2Y_XN1GGn0Lzm"
```

```
"Filestaris": "success"
"CreationTime": "2014-06-11T15:02:40Z"
```

```
"RequestId": "08A3B71B-FE08-4B03-974F-CC7EA6DB1828"
```

2.12.3 View the import list

Description

View the SQL Server database import list and the status of import tasks, and determine whether the import tasks are completed.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: DescribeImportsForSQLServer
DBInstanceId	String	Yes	Instance ID.
ImportId	Integer	No	Migration result ID.
StartTime	String	Yes	Query start time, for example, 2011-06-11T15:00Z.
EndTime	String	Yes	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
TotalRecordCount	Integer	Total number of records.
PageNumber	Integer	Page number.
PageRecordCount	Integer	Number of SQL statements displayed on the current page.
Items	List<SQLServerImport>	None.

SQLServerImport parameters

Name	Type	Description
ImportId	Integer	Migration ID.
FileName	String	Name of a file.
DBName	String	Name of the imported database.
ImportStatus	Integer	Import status. Values: • Pending • Importing • Success • Failed • Cancelled • Cancelling
StartTime	String	Import time. Format: YYYY-MM-DD'T'HH:mm:ssZ, for example, 2011-05-30 T12:11:40Z.

Request example

```
https://rds.aliyuncs.com/?Action=DescribeImportsForSQLServer
&DBInstanceId=rianeurbfaeuq2u2a1370572118496
&StartTime=2014-06-11T15:00Z
&EndTime=2014-06-11T16:00Z
```



```
&<Public Request Parameters>
```

Response example

XML format:

```
<DescribeImportsForSQLServerResponse>
  <RequestId>08A3B71B-FE08-4B03-974F-CC7EA6DB1828</RequestId>
  <TotalRecordCount>1</TotalRecordCount>
  <PageNumber>1</PageNumber>
  <PageRecordCount>1<PageRecordCount>
  <Items>
    <SQLServerImport>
      <DBName>testdb01</DBName>
      <FileName>testdb01_1370572475975.bak</FileName>
      <ImportStatus>Success</ImportStatus>
      <StartTime>2014-06-11T15:11:40Z</StartTime>
    </SQLServerImport>
  </Items>
</DescribeImportsForSQLServerResponse>
```

JSON format:

```
"PageNumber":1,
"TotalRecordCount":1,
"PageRecordCount":1
"Items":
{"SQLServerImport":

  "DBName":"testdb01"
  "FileName":"testdb01_1370572475975.bak"
  "ImportStatus":"Success"
  "StartTime": "InnoDB"

"RequestId": "08A3B71B-FE08-4B03-974F-CC7EA6DB1828"
```

2.12.4 Migrate from other RDS instances

Description

Migrate data from other RDS instances. It supports MySQL and SQL Server instances whose type are Dedicated Instances. For more information about the instance type, see [Instance type list](#).

MySQL instances support batch database migration. During migration, the source instance status is “Migrating” and the destination instance status is “Importing data”. The following conditions must be met:

- Database migration is performed between different instances that belong to the same user.
- The instance is running.

- The instance database is running.
- The destination instance lock mode is Normal.
- Destination instance storage space > Space occupied by the destination instance – Destination instance database space + Source instance database space.
- Databases to be migrated exist in both the source and destination instances and are activated.

SQL Server instances support batch database migration. During migration, the source instance status is “Migrating” and the destination instance status is “Importing data”. The following conditions must be met:

- Database migration is performed between different instances that belong to the same user.
- The instance is running.
- The instance database is running.
- The destination instance lock mode is Normal.
- Destination instance storage space > Space occupied by the destination instance – Destination instance database space + Source instance database space.

Request parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: ImportDatabaseBetweenInstances
DBInstanceId	String	Yes	Instance ID.
SourceDBInstanceId	String	Yes	Name of the source instance, which cannot be the same as the name of the instance to which the data is migrated.
DBInfo	String	Yes	Database information (in the JSON string format) of the instance to which data is migrated. • For MySQL instances, the parameter value is an array,

Name	Type	Required?	Description
			for example, {"DBNames":["mydb","mydb2"]}. For the MySQL type, the names of the source database and destination database must be the same. In the example, data is migrated to two databases (mydb and mydb2), which must exist in the source and destination instances. For SQL Server instances , the parameter value is in the format of key-value pair, where key indicates the source database, and the destination is the database to which data is migrated, for example, {"DBNames":{"srcdb":"destdb","srcdb2":"destmydb2"}}. For the SQLServer type , the names of the source database and destination database may be different. In this example, the data of srcdb is migrated to destdb

Name	Type	Required?	Description
			, and the data of srcdb2 is migrated to destmydb2 . However, the names of multiple source databases must be different, and the names of multiple destination databases must be different too.

DBInfo parameters

Name	Type	Required?	Description
DBNames	List	Yes	Names of the databases to be migrated, for example, ["mydb", "mydb2"].

Return parameters

Name	Type	Required?
<Public Return Parameters>		For more information, see Public parameters .
ImportId	Integer	ID of the instance to which data is imported.

Request example

```
https://rds.aliyuncs.com/?Action=ImportDatabaseBetweenInstances
&DBInstanceId=riauvjz6zajfiq6ba1370329449201
&SourceDBInstanceId=rdsmn6nqimn6nqi
&{"DBNames":["mydb","mydb2"]}
&<Public Request Parameters>
```

Return example

XML format

```
<ImportDatabaseBetweenInstancesResponse>
  <ImportId>2122321</ImportId>
  <RequestId>5A77D650-27A1-4E08-AD9E-59008EDB6927</RequestId>
```

```
</ImportDatabaseBetweenInstancesResponse>
```

JSON format

```
"ImportId":2122321
"RequestId":"5A77D650-27A1-4E08-AD9E-59008EDB6927"
```

2.12.5 CancelImport

Description

Cancel the tasks of migration from SQL Server self-built clouds and other RDS instances of the MySQL type. Currently, migration from other RDS instances of the SQL Server type cannot be canceled.

Request parameters

Name	Type	Required	Description
Action	String	Yes	Required parameter. Value: CancelImport .
DBInstanceId	String	Yes	Instance ID.
ImportId	Integer	Yes	Migration ID.

Return parameters

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

Request example

```
https://rds.aliyuncs.com/?Action=CancelImport
&DBInstanceId=rdsaiiabnailiabn
&ImportId=12342323
&<Public Request Parameters>
```

Return example

XML format

```
<CancelImportResponse>
  <RequestId>17F57FEE-EA4F-4337-8D2E-9C23CAA63D74</RequestId>
```

```
</CancelImportResponse>
```

JSON format

```
"RequestId": " 17F57FEE-EA4F-4337-8D2E-9C23CAA63D74"
```

2.13 Tag management

2.13.1 Bind tags

Description

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	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.
Tags	JSON string	Yes	• The list of tags to bind, 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.

Name	Type	Required	Description
			Format sample: {"key1": "value1", "key2": ""}.

Return Parameters

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

2.13.2 Query tags

Description

Query the information of 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 querying 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	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.
Tags	Json String	No	- The list of tags to query, 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>	Array composed of tag information.

TagInfos

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

DBInstanceIds

Name	Type	Description
DBInstanceIds	String	Instance ID.

2.13.3 Unbind tags

Description

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 unbinding tags, if only TagKey is provided and no TagValue is provided, tags matching TagKey criteria are unbound.

Request Parameters

Name	Type	Required?	Description
Action	String	Yes	Required parameter. Value: RemoveTagsFromResource .
RegionId	String	Yes	Region where the instance is located. For example, cn-hangzhou.
DBInstanceIds	String	Yes	Instance ID.

Name	Type	Required?	Description
Tags	Json String	Yes	- The tags to unbind, 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 .

Request example

Response example

2.14 Schedules

2.14.1 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

Error code	Description	HTTP status code
InvalidOwnerAccount	The specified OwnerAccount is not valid.	400
InvalidOwner	OwnerId and OwnerAccount can't be used at one API access.	400
Throttling	Request was denied due to request throttling.	400
InvalidAction	The specified action is not valid.	403
ActionUnauthorized	The specified action is not available for you	403
UnsupportedHTTPMethod	This http method not supported.	403
UnsupportedParameter	The parameter "<parameter name>" is not supported.	400
Forbidden.InstanceNotFound	The specified DB instance does not exist.	404
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>" is not valid.	400

Error code	Description	HTTP status code
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

Error code	Description	HTTP status code
OperationDenied.DBInstanceStorageReduce	The operation is not permitted due to reduce storage.	403
OperationDenied.DBInstanceStatus	The operation is not permitted due to instance status.	403
DependencyViolation	The operation is not permitted due to instance mount read only or guard instance.	403
InvalidConnectionStringPrefix.Duplicate	The connection string is not in the available range or occupied.	400
QuotaExceeded.SwitchTime	The quota of switch time exceed.	400
OperationDenied.LockMode	The operation is not permitted due to lock of instance.	403
InvalidSecurityIps.Duplicate	The quota of security ip exceeds.	400
OperationDenied.CurrentEngineVersion	The operation is not permitted due to specified current version .	400
OperationDenied.ReadOnlyDBInstanceLower	The operation is not permitted due to higher read only instance version	403
OperationDenied.GuardDBInstanceLower	The operation is not permitted due to higher guard instance version .	403
OperationDenied.MasterDBInstanceState	The status of the specified master instance does not support this operation.	403
QuotaExceeded.DBName	The quota of db exceeds.	400
InvalidDBName.Duplicate	The specified DB name is invalid or already exists.	400
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.DBInstanceCld	The operation is not permitted due to DBInstanceCld and SourceDBInstanceCld is same.	403
InvalidTaskId.NotFound	The ImportId provided does not exist in our records.	400
OperationDenied.IncorrectTaskStatus	The operation is not permitted due to status of import.	403
InvalidAccountName.keyword	The specified AccountName is a reserved keyword.	400
InvalidAccountName.Duplicate	The specified AccountName already exists.	400
QuotaExceeded.AccountName	The quota of account exceeds.	403
OperationDenied.AccountStatus	The status of the account does not support this operation.	403

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

Error code	Description	HTTP status code
InvalidDBInstanceName.NotFound	The DBInstanceId provided does not exist in our records.	403
InvalidConnectionMode.ValueNotSupported	The specified parameter “ConnectionMode” is not valid.	400
InvalidConnectionString.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 DBInstanceId does not exist.	400
InvalidDBInstanceId.QuotaExceeded	The quota of instance id exceeds.	400
InvalidDBInstanceNetType.NotFound	The Specified DB instance net type is not found.	404
InvalidDBInstanceNetType.ValueNotSupport	The specified parameter “DBInstanceNetType” is not valid.	400
InvalidDBInstanceType.ValueNotSupport	The specified parameter “DBInstanceType” is not valid.	400
InvalidEngineVersion.Malformed	The specified parameter “EngineVersion” is not valid.	400
InvalidInstanceNetworkType.ValueNotSupported	The specified parameter “InstanceNetworkType” is not valid.	400
InvalidParameter	The specified parameter “dbInstanceId” is not valid.	400
InvalidPort.Malformed	Specified port is not valid.	400
InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	400

Error code	Description	HTTP status code
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
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 cloudinstancelp is use , please check params.	406

Error code	Description	HTTP status code
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
bpclzNoNotEqualsRdsM ultIzNo	Specified vpc IzNo not equal rds IzNo.	400

2.14.2 Server error code table

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

2.14.3 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

Status	Description
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

2.14.4 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 times of executing an SQL statement 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

API parameter	Meaning
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
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

2.14.5 Forbidden keywords table

ApsaraDB 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, c hange, check, condition, continue, cross, current_timestamp, database, day_micros econd, 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, sqlexception, 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, le ave, 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, colu mn, 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, loop, mediumblob, middleint, mod, not , numeric, option, order, outfile, procedure,

Parameter field	field Keyword description
	range, real, release, replace, return, rlike, second_microsecond, separator, smallint, sql , sqlwarning, sql_small_result, straight_join , then, tinytext, trigger, union, unsigned, use , utc_time, varbinary, varying, while, x509, zerofill, galaxy

RDS for SQL Server

ApsaraDB for SQL Server	Parameter field
DBName/AccountName	root, admin, eagleye, master, aurora, sa, sysadmin, administrator, mssqlid, 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

ApsaraDB for SQL Server	Parameter field
	, 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