

Alibaba Cloud ApsaraDB for MySQL Quick Start for SQL Server

Issue: 20190506

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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.	 Notice: Take the necessary precautions to save exported data containing sensitive information.
	This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.	 Note: You can use Ctrl + A to select all files.
>	Multi-level menu cascade.	Settings > Network > Set network type
Bold	It is used for buttons, menus, page names, and other UI elements.	Click OK.
Courier font	It is used for commands.	Run the <code>cd / d C :/ windows</code> command to enter the Windows system folder.
<i>Italics</i>	It is used for parameters and variables.	<code>bae log list --instanceid Instance_ID</code>
[] or [a b]	It indicates that it is an optional value, and only one item can be selected.	<code>ipconfig [-all -t]</code>

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

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1 Limits

To guarantee instance stability and security, RDS for SQL Server has certain limits.

Function	Cluster (AlwaysOn) Edition	High-Availability Edition		Basic Edition
	2017 Enterprise	2016 Standard/Enterprise 2012 Standard/Enterprise	2008 R2 Enterprise	2016 Web 2012 Web/Enterprise
Maximum number of ^(Note) databases	50	50	50	100
Maximum number of database accounts	Unlimited	Unlimited	500	Unlimited
Create user, LOGIN, or database	Supported	Supported	Supported	Supported
Database-level DDL trigger	Supported	Supported	Not supported	Supported
Database permission authorization	Supported	Supported	Not supported	Supported
KILL permission	Supported	Supported	Supported	Supported
LinkServer	Supported	Supported	Not supported	Not supported
Distributed transaction	Supported	Supported	Not supported	Not supported
SQL Profiler	Supported	Supported	Supported	Supported
Tuning Advisor	Supported	Supported	Not supported	Supported
Change Data Capture (CDC)	Supported	Supported	Not supported	Supported
Change Tracking	Supported	Supported	Supported	Supported

Function	Cluster (AlwaysOn) Edition	High-Availability Edition		Basic Edition
	2017 Enterprise	2016 Standard/Enterprise 2012 Standard/Enterprise	2008 R2 Enterprise	2016 Web 2012 Web/Enterprise
Windows domain account login	Not supported	Not supported	Not supported	Not supported
Email				
SQL Server Integration Services (SSIS)				
SQL Server Analysis Services (SSAS)				
SQL Server Reporting Services (SSRS)				
R Services				
Common Language Runtime (CLR)				
Asynchronous communication				
Replication				
Policy management				

**Note:**

- RDS for SQL Server instances already have Microsoft SQL Server licenses and do not support your own licenses.

- For SQL Server 2012/2016/2017, you can [submit a ticket](#) to apply for increasing the higher maximum number of databases.

2 Create an instance

You can use the RDS console or APIs to create an RDS instance. For more information about instance pricing, see [Pricing of ApsaraDB for RDS](#). This document describes how to use the RDS console to create an instance. For more information about how to use APIs to create an instance, see [CreateDBInstance](#).

Prerequisites

- You must have registered to an Alibaba Cloud account.
- If you are creating a Pay-As-You-Go instance, make sure that your account balance is sufficient.

Procedure

1. Log on to the [RDS console](#).
2. On the Instances page, click Create Instance.
3. Select Subscription or Pay-As-You-Go. For more information about billing methods, see [Billing items and billing methods](#).
4. Select the instance configuration. The parameters are described as follows:
 - Basic configuration
 - Region and zone: Select the region and zone in which the instance is located. Some regions support both single-zone and multi-zone instances, while some regions support only single-zone instances.



Note:

Products in different regions cannot intercommunicate through the intranet, and you cannot change the instance region after creating an instance. Therefore, special attention is required when you select the region.

- Database engine: RDS supports MySQL, SQL Server, PostgreSQL, and PPAS . Different database types are supported in different regions. Choose the database type according to the instructions on the RDS console.
- Version: indicates the database version. RDS for SQL Server supports 2017 , 2016, 2012, and 2008 R2. Different database versions are supported in different regions.
- Series: RDS for SQL Server instances support the Basic Edition, High-Availability Edition, and AlwaysOn (Cluster) Edition. Different database versions support different series. For more information, see [product series](#).
- Network type: RDS supports the classic network and virtual private cloud (VPC). A VPC needs to be created beforehand. Alternatively, you can change the network type after creating an instance. For more information, see [Set network type](#).
- Specifications: indicate the CPU and memory occupied by the instance, the number of connections, and the maximum IOPS. For more information about instance specifications, see [Instance type list](#).
- Storage: indicates space used by data, system files, and transaction files.
- Subscription time: indicates the duration of a Subscription instance.
- Quantity: indicates the number of instances with the same configurations to be purchased.

5. Click Buy Now to go to the Confirm Order page.



Note:

To buy multiple instances with different configurations, click Add To List for each instance type and click Batch Purchase.

6. Select Product Terms of Service and Service Level Notice and Terms of Use, and then:

- Click Pay if the billing method of the instance is Subscription.
- Click Activate if the billing method of the instance is Pay-As-You-Go.

3 Initial configuration

3.1 Set the whitelist

A whitelist is used to restrict access to specified IP addresses and specified IP segments. You cannot access a database unless a whitelist is set. We recommend that you periodically check and adjust your whitelists according to your requirements to maintain RDS security. This document provides the necessary information and procedure to set the whitelist.

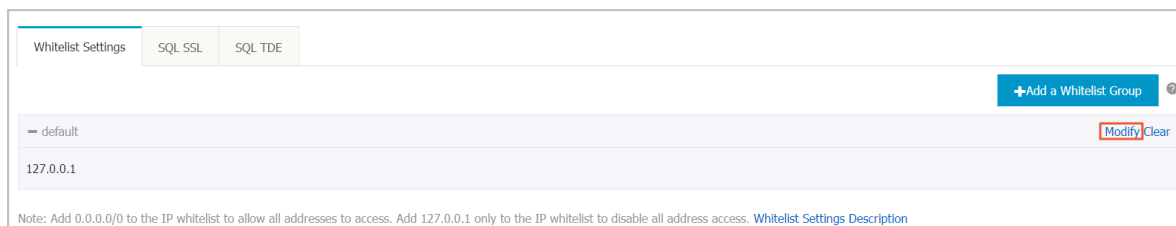
Precautions

- The system automatically creates a default whitelist group for each newly created RDS instance. This default whitelist group can only be modified or cleared, but cannot be deleted.
- For each newly created RDS instance, the local loopback IP address 127.0.0.1 is added to the default whitelist group by default. This means that all the IP addresses or IP segments are prohibited to access this RDS instance. Therefore, you must delete 127.0.0.1 from the default whitelist group first, before you add other IP addresses or IP segments to the RDS whitelist.
- % or 0.0.0.0/0 indicates any IP address is allowed to access the RDS instance. This configuration greatly reduces the security of the database and is not recommended.
-

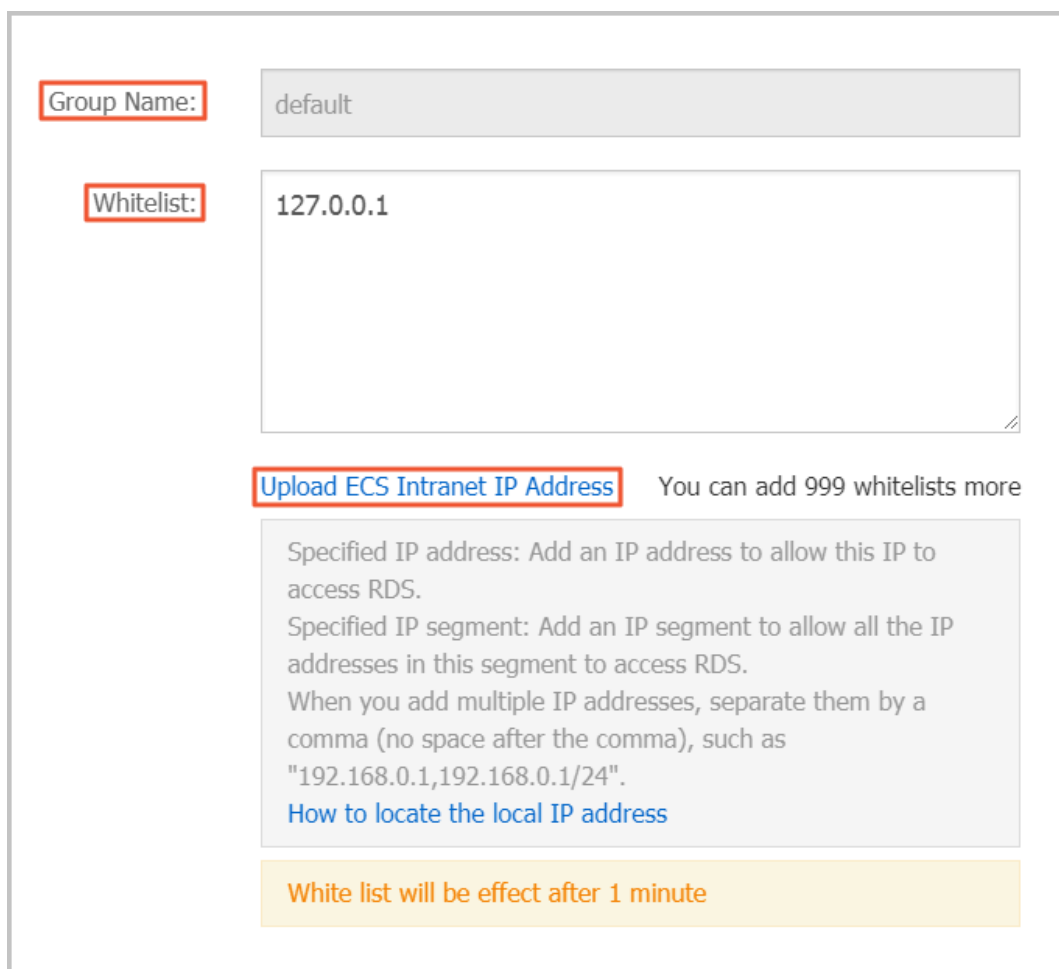
Procedure

1. Log on to the [RDS console](#).
2. Select the region where the target instance is located.
3. Click the name of the target instance to go to the Basic Information page.
4. Select Security in the left-side navigation pane to enter the Security page.

5. On the Whitelist Settings tab page, click **Modify** of the default whitelist group, as shown in the following figure.



6. On the Modify Group page, add the IP addresses or IP segments to access the RDS instance to Whitelist field. If you want to add the ECS intranet IP addresses, click **Upload ECS Intranet IP Address** and select the IP addresses according to the prompt, as shown in the following picture.



- **Group Name:** It can contain 2 to 32 characters including lowercase letters, digits, or underscores. The group name must start with a lowercase letter and end

with a letter or digit. This name cannot be modified once the whitelist group is successfully created.

- **Whitelist:** Enter the custom IP addresses or IP segments that can access the RDS instance.
 - If you enter an IP segment, such as 10.10.10.0/24, it indicates that any IP address in the format of 10.10.10.X can access the RDS instance.
 - If you want to enter multiple IP addresses or IP segments, separate them by commas (,) (do not add blank spaces), such as 192.168.0.1,172.16.213.9.
- **Upload ECS intranet IP Address:** By clicking this button, you can select the intranet IP addresses of the ECS instances under the same account with the RDS instance, which is a quick method to add ECS intranet IP addresses.

7. Click OK.

Modify or delete the whitelist group


You can modify or delete the whitelist group according your business requirements. The detailed procedure is as follows:

1. Log on to the [RDS console](#).
2. Select the region where the target instance is located.
3. Click the name of the target instance to go to the Basic Information page.
4. Select Security in the left-side navigation pane to enter the Security page.
5. On the Whitelist Settings tab page, click Modify or Delete button of the target whitelist group.
6. Click OK after you modify the IP addresses or IP segments.

3.2 Apply for an Internet address

RDS provides two types of address: intranet address and Internet address.

Intranet and Internet addresses

Address	Description
Intranet address	<p>The intranet address is generated by default.</p> <p>Use the intranet address if all of the following conditions are met:</p> <ul style="list-style-type: none">• Your application is deployed on an ECS instance.• The ECS instance is located in the same region as your RDS instance.• The ECS instance has the same <i>network type</i> as your RDS instance. <p>The intranet address is recommended because accessing RDS through the intranet is most secure and delivers optimal performance.</p>
Internet address	<p>You need to manually apply for the Internet address. You can also release it anytime.</p> <p>Use the Internet address if you cannot access RDS through the intranet. Specific scenarios are as follows:</p> <ul style="list-style-type: none">• An ECS instance accesses your RDS instance but the ECS instance is located in a different region or has a network type different from your RDS instance.• A server or computer outside Alibaba Cloud accesses your RDS instance. <div> Note:<ul style="list-style-type: none">• The Internet address and traffic are currently free of charge.• Using the Internet address reduces security. Please exercise caution• To ensure high security and performance, it is recommended that you migrate your application to an ECS instance that is in the same region and has the same network type as your RDS instance and then use the intranet address.</div>

Apply for an Internet address

1. Log on to the [RDS console](#).
2. In the upper-left corner, select the region where the RDS instance is located.
3. Find the RDS instance and click its ID.
4. In the left-side navigation pane, choose Connection Options.
5. Click Apply for Internet Address.

6. In the displayed dialog box, click OK.

The Internet address is generated.



Note:

You can view the Internet address only after the [whitelist](#) is configured.

7. (Optional) To modify the Internet address or port number, click Modify Connection Address. In the displayed dialog box, set the Internet address and port number and click OK.

- Connection Type: Select Internet address.



Note:

This option is available only after you have applied for the Internet address.

- Connection Address: You can modify the address prefix, which consists of 8 to 30 characters, including letters and digits, and starts with a lower-case letter.
- Port: The port number can be modified only if the RDS network type is classic network.

Related API

API	Description
Apply for an Internet connection string	Apply for an Internet address.

3.3 Creating accounts and databases

3.3.1 Create accounts and databases (SQL Server 2017)

Before RDS can be used, a database and an account must be created for the RDS instance. For a SQL Server 2017 instance, you need to create an initial account from the RDS console, and then create databases and other accounts through a client. This article uses Microsoft SQL Server Management Studio (SSMS) 17.1 as the client.



Note:

This article is applicable only to RDS for SQL Server 2017. For other versions, see [Create accounts and databases \(SQL Server 2012 or 2016\)](#) and [Create accounts and databases \(SQL Server 2008 R2\)](#).

Precautions

- Databases in an instance share all resources of the instance.
- When assigning permissions to database accounts, assign only the minimum permissions required. If necessary, split accounts and databases into smaller units so that each account can only access data for its own services. If an account does not need to write data to a database, assign read-only permissions.
- For database security, set strong passwords for the accounts and change the passwords regularly.

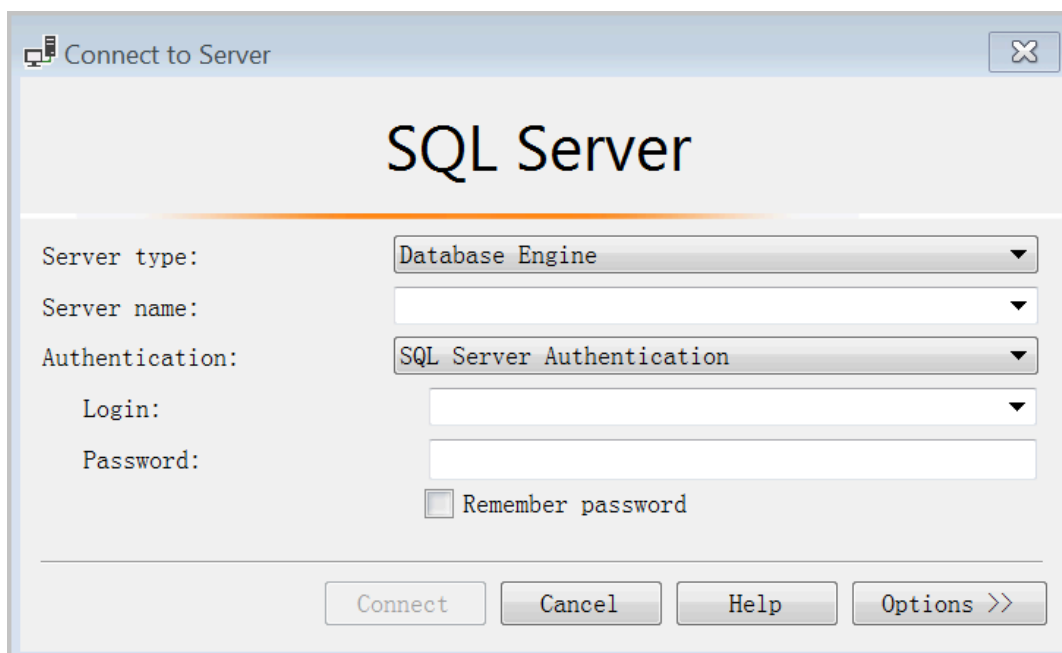
Create an initial account

1. Log in to the [RDS console](#).
2. Select the region of the target instance.
3. Click the ID of the instance.
4. In the left-side navigation pane, select Accounts to visit the Accounts page.
5. Click Create Initial Account, and fill in the required fields.
 - Database Account: refers to the name of the account. It can have 2 to 16 characters including the lower-case letters, digits, or underscores (_). It must begin with a letter and end with a letter or digit.
 - Password: refers to the password corresponding to the initial account. It can have 8 to 32 characters including at least three of the following:
 - Upper-case letters
 - Lower-case letters
 - Digits
 - Special characters (!@#\$%^&*()_-=)
 - Re-enter Password: re-enter the password to make sure the password is entered correctly.
6. Click OK, and the account is created.

Create databases and other accounts

1. Add the IP address of a server or computer to the RDS whitelist. For more information on how to set the whitelist, see [Set the whitelist](#).
2. Start the Microsoft SQL Server Management Studio client.

3. Enter the connection information, as shown in the following figure.

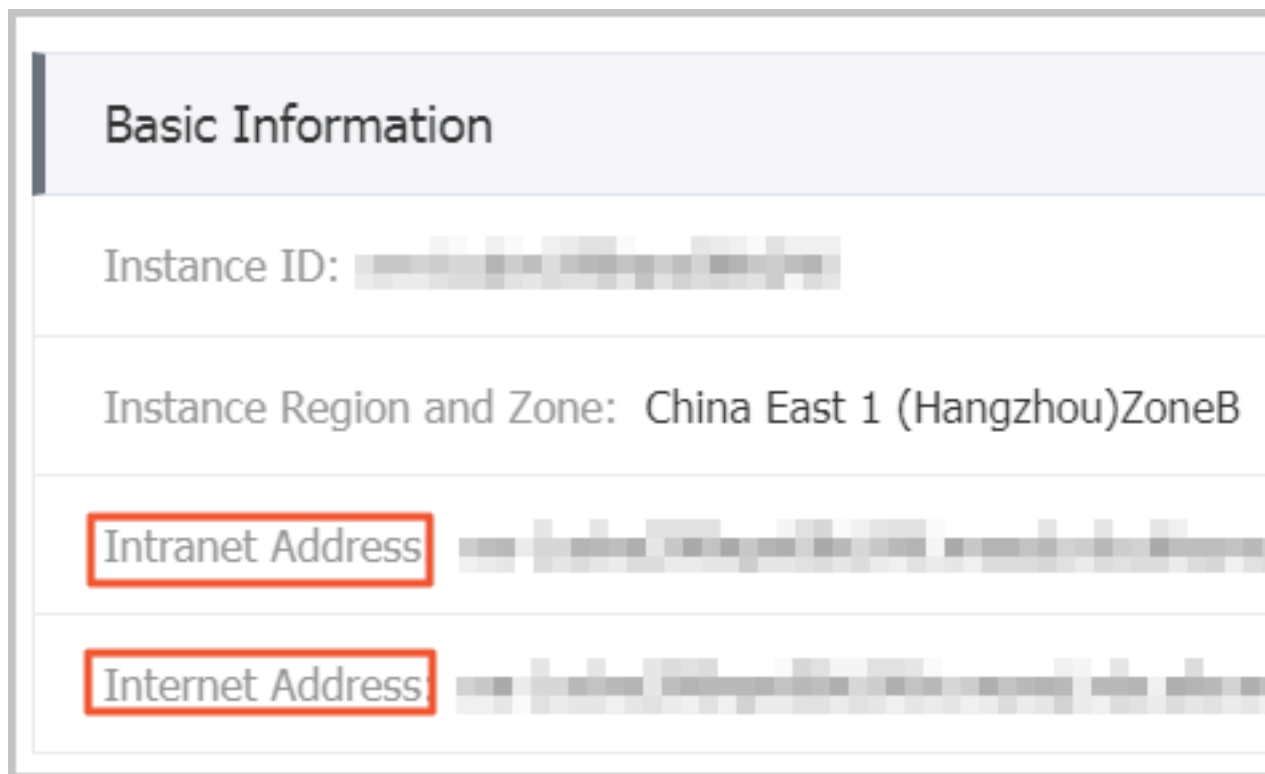


The screenshot shows a 'Connect to Server' dialog box. The title bar says 'Connect to Server'. The main heading is 'SQL Server'. Below this, there are several fields: 'Server type' is a dropdown menu currently showing 'Database Engine'; 'Server name' is an empty text box; 'Authentication' is a dropdown menu currently showing 'SQL Server Authentication'; 'Login' is an empty text box; and 'Password' is an empty text box. Below the password field is a checkbox labeled 'Remember password'. At the bottom of the dialog, there are four buttons: 'Connect', 'Cancel', 'Help', and 'Options >>'.

- **Server type:** select Database Engine.
- **Server name:** consists of the Internet/intranet address and the corresponding port number of the RDS instance. The connection address and the port number must be separated by a comma, for example, `rm - bptest . sqlserver .`

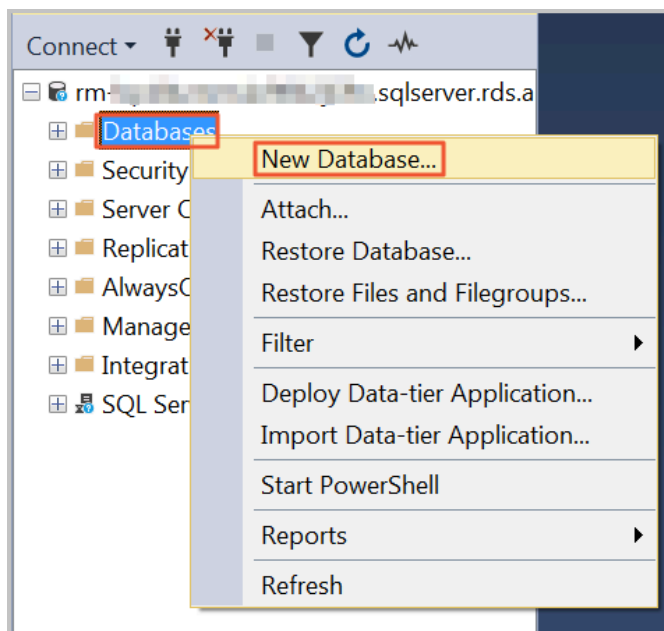
`rds . aliyuncs . com , 3433` . The following shows the procedure to view the connection address and the port information of the RDS instance.

- a. Log on to the [RDS console](#).
- b. Select the region where the target instance is located.
- c. Click the ID of the instance to visit the Basic Information page.
- d. In the Basic Information area, you can find the Internet/intranet address and Internet/intranet port number of the instance, as shown in the following figure.



- Authentication: select SQL Server Authentication.
 - Login: refers to the initial account name of the RDS instance.
 - Password: refers to the password of the initial account of the RDS instance.
4. Click Connect.

5. Right-click Databases, and then select New Database.



6. In the New Database window, select the General tab page.

7. Enter the name of the new database in the Database name field, and then click OK.

New Database

Select a page

- General**
- Options
- Filegroups

Script ▼ ? Help

Database name:

Owner:

☒ Use full-text indexing

Database files:

Logical Name	File Type	Filegroup	Initial Size (MB)
	ROWS Data	PRIMARY	5
_log	LOG	Not Applicable	1

Connection

Server:
rm-bp18ummvio98b2j59o.sqlser

Connection:
doc

[View connection properties](#)

Progress

Ready

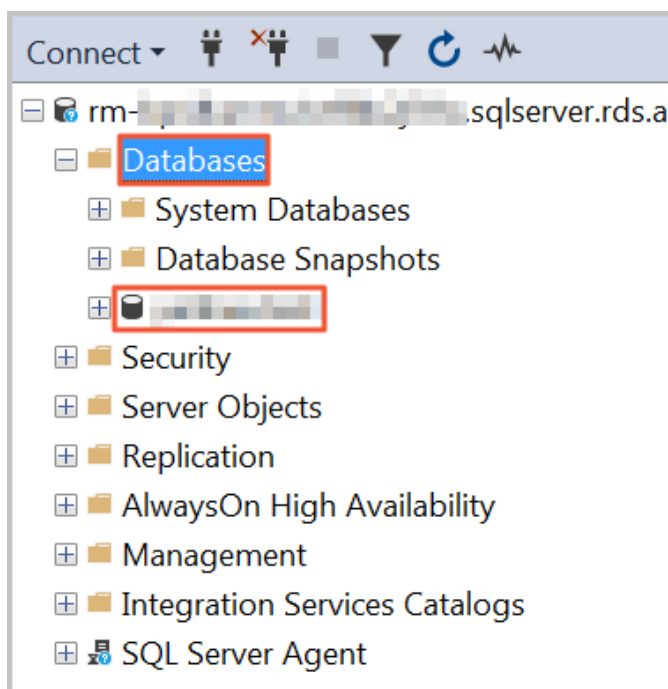
Add

8. When the new database is created successfully, you can find it in Databases, as shown in the following figure.

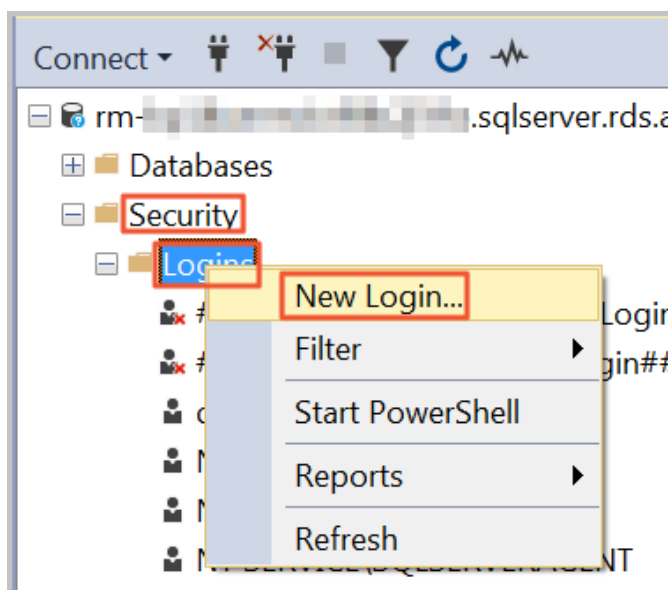


Note:

We do not recommend that you do any operations in the default System Databases.



9. Select Security, right-click Logins, and then select New Login to create a standard account, as shown in the following figure.



10. Enter the name and password of the new account, and select the default database, as shown in the following figure.



Note:

Select SQL Server authentication and adjust the other password policies based on your business requirements.

Login - New

Select a page

- General
- Server Roles
- User Mapping
- Securables
- Status

Script Help

Login name:

☐ Windows authentication

☒ SQL Server authentication

Password:

Confirm password:

☐ Specify old password

Old password:

☒ Enforce password policy

☒ Enforce password expiration

☒ User must change password at next login

☐ Mapped to certificate

☐ Mapped to asymmetric key

☐ Map to Credential

Mapped Credentials

Credential	Provider
------------	----------

Default database: master

Default language: <default>

Connection

Server: rm-bp18ummvio98b2j59o.sqlser

Connection: doc

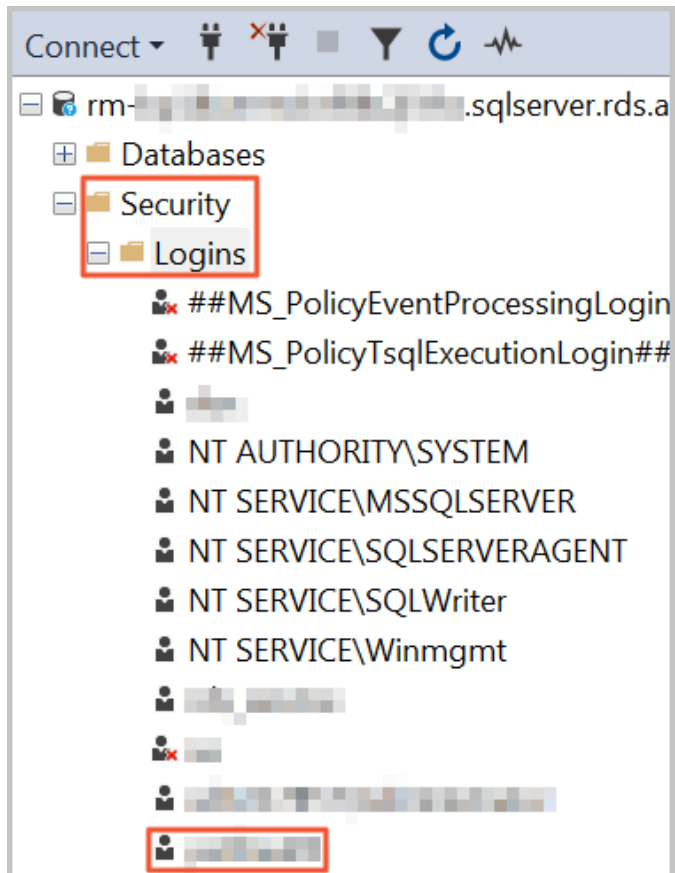
[View connection properties](#)

Progress

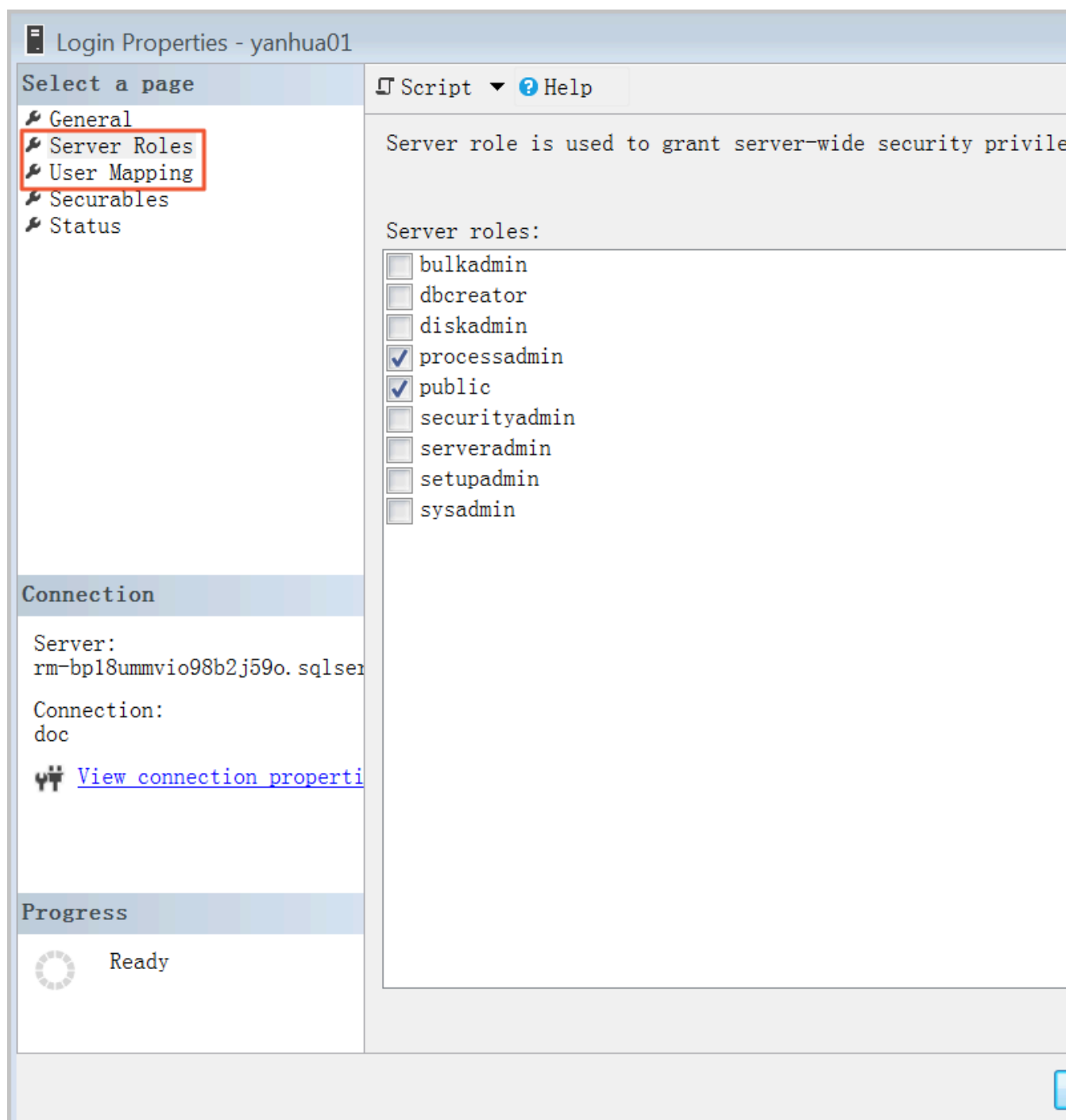
Ready

11. Click OK.

12. When the new account is created successfully, you can find it in Security > Logins, as shown in the following figure.



13. Double-click the new account to set its properties. You can authorize this account on the Server Roles tab page and bind it to certain databases on the User Mapping tab page, as shown in the following figure.



14. Click OK.

4 Connect to an instance

After completing the initial configurations, you can connect to the RDS for SQLServer instance through a SQL Server client or your application by configuring the connection address, port number, and account information. The SQL Server client and your application can be deployed on ECS or a local computer.

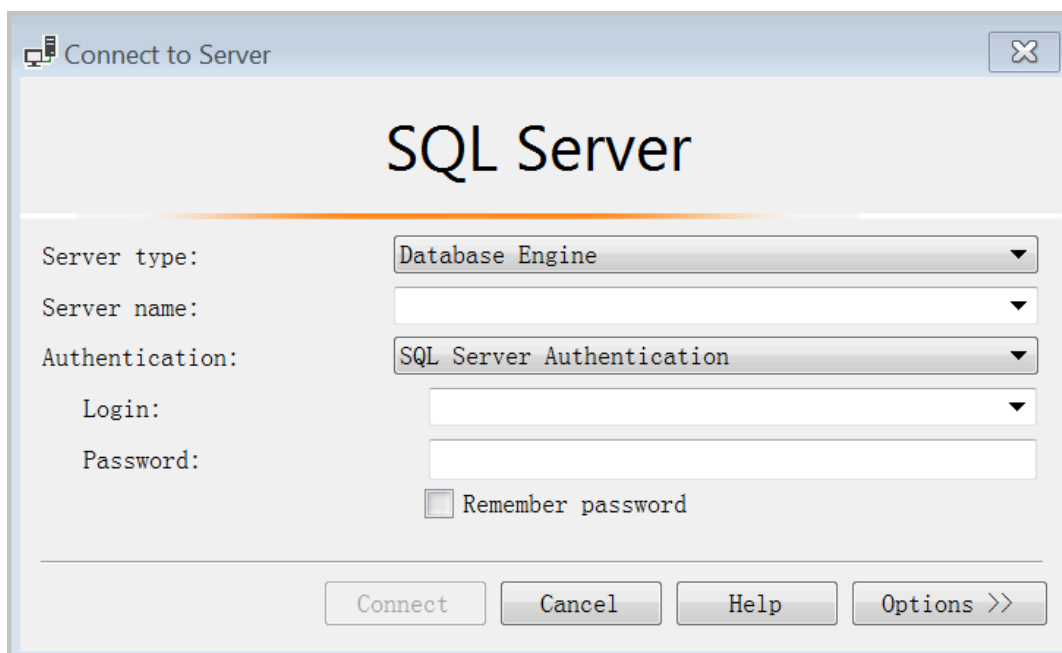
If you are connecting from ECS to RDS through the intranet address, make sure that:

- The ECS and RDS instances are both in the classic network or in the same VPC.
- You have added the ECS intranet address to the RDS whitelist.


Use a client to connect to RDS for SQL Server

The following introduces the connection procedure by taking the Microsoft SQL Server Management Studio (SSMS) client as an example.

1. On your ECS instance or local computer, start Microsoft SQL Server Management Studio.
2. In the Connect to Server dialog box, enter connection information.



Parameter	Description
Server type	Select Database Engine.

Parameter	Description
Server name	<p>Enter the connection address and port number and separate them with a comma. For example, rm-bptest.sqlserver.rds.aliyuncs.com, 3433</p> <p>You can view the intranet or Internet address and port number as follows:</p> <ol style="list-style-type: none"> Log on to the RDS console. At the upper-left corner, select the region where the RDS instance is located. Click the instance ID. <p>The Basic Information area shows the addresses and port numbers.</p> 
Authentication	Select SQL Server Authentication.
Login	Name of an RDS instance account.
Password	Password of the preceding account.

3. Click Connect to connect to the RDS instance.

5 Read-only instances

5.1 Introduction to read-only instances

Scenario

For services that involve a small number of write requests but a great number of read requests, a single instance may not be able to resist the read pressure. As a result, services may be affected. To achieve the elastic expansion of the read ability and share the pressure of the database, you can create one or more read-only instances in a region. The read-only instances can handle massive read requests and increase the application throughput.

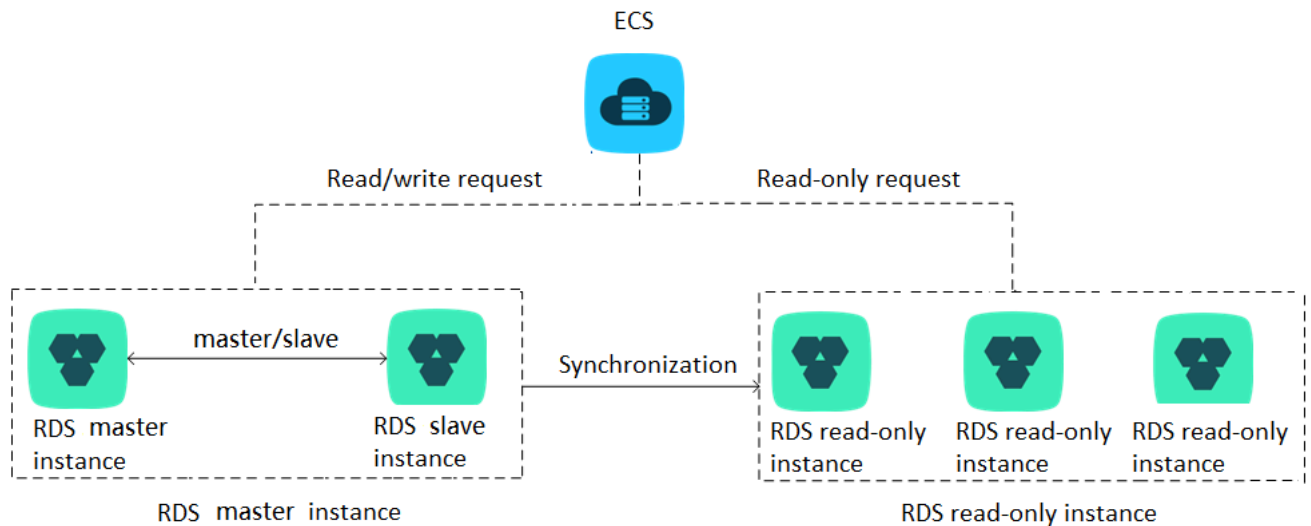
Overview

A read-only instance is a read-only copy of the master instance. Changes to the master instance are also automatically synchronized to all relevant read-only instances. The synchronization works even if the master and read-only instances have different network types. Read-only instances and the master instance must be in the same region, but they can be in different zones. The following topology shows the positioning of the read-only instance.



Note:

- Currently the following instances support read-only instances:
 - MySQL 5.7 High-Availability Edition (based on local SSDs)
 - MySQL 5.6
 - SQL Server 2017
- Each read-only instance adopts a single-node architecture (without slave nodes).



Pricing

The billing method of read-only instances is Pay-As-You-Go. For more information, see [Pricing](#).



Note:

For information about data retention policies for read-only instances, see [Impact of expiration and overdue payment](#).

Features

Read-only instances offer the following features:

- The specifications of a read-only instance differ from those of the master instance, and can be changed at any time, to facilitate easy elastic upgrade and downgrade.
- Read-only instances support billing measured per hour, which is user-friendly and cost-efficient.
- No account or database maintenance is required for a read-only instance. Both the account and database are synchronized through the master instance.
- Read-only instances support independent whitelist configuration.
- Read-only instances support system performance monitoring.

Up to 20 system performance monitoring views can be used, which includes disk capacity, IOPS, connections, CPU utilization, and network traffic. Users can view the load of instances at ease.

- Read-only instances provide optimization suggestions.

Optimization tools support storage engine check, primary key check, large table check, and excessive indexing and missing indexing checks.

Restrictions

- Quantity of read-only instances

Database type	Memory	Max number of read-only instances
MySQL	≥ 64 GB	10
	< 64 GB	5
SQL Server	Any	7

- Read-only instances do not support backup settings or temporary backup.
- Instance recovery:
 - Read-only instances do not support the creation of temporary instances through backup files or backups at any point in time. Read-only instances do not support the overwriting of instances using backup sets.
 - After creating a read-only instance, the master instance does not support data recovery through the direct overwriting of instances using backup sets.
- You cannot migrate data to read-only instances.
- You cannot create or delete databases for read-only instances.
- You cannot create or delete accounts for read-only instances.
- You cannot authorize accounts or modify account passwords for read-only instances.

FAQs

Can the accounts on the master instance be used on the read-only instances?

Answer: Accounts on the master instance are synchronized to the read-only instances. You can use the accounts to read data from the read-only instances but cannot write data into the read-only instances.

5.2 Create a read-only instance

You can create read-only instances to process massive read requests sent to the database and increase the application throughput. A read-only instance is a read-

only copy of the master instance. Changes to the master instance are also automatically synchronized to all relevant read-only instances through the native replication capability of MySQL.

Attention

- Currently the following instances support read-only instances:
 - MySQL 5.7 High-Availability Edition (based on local SSDs)
 - MySQL 5.6
 - SQL Server 2017
- Quantity of read-only instances

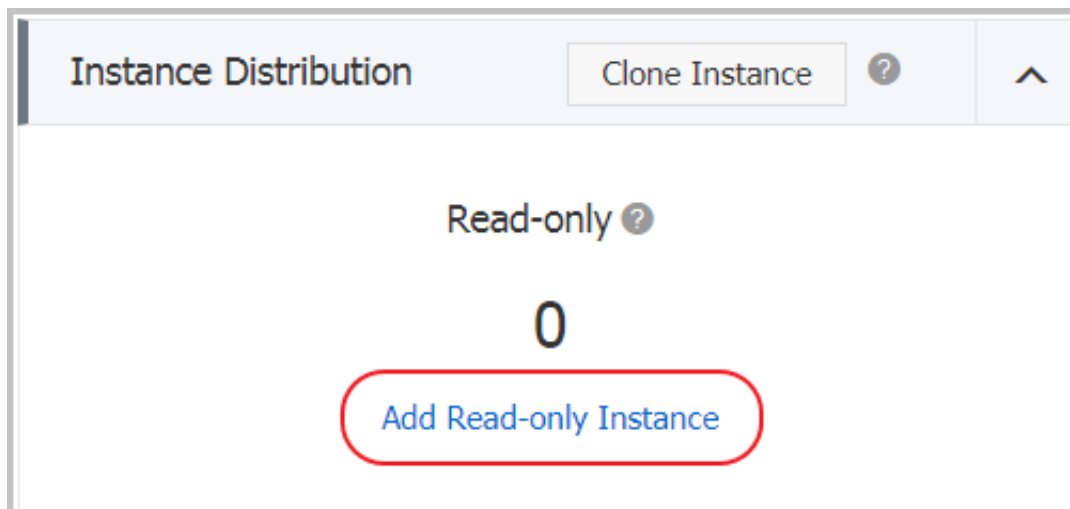
Database type	Memory	Max number of read-only instances
MySQL	≥ 64 GB	10
	< 64 GB	5
SQL Server	Any	7

- Read-only instance is subject to an additional charge and its billing method is Pay-As-You-Go. For more information, see [Pricing](#) for read-only instances.
- The read-only instance automatically copies the whitelist its master instance, but the whitelist of the read-only instance and that of the master instance are independent. To modify the whitelist of the read-only instance, see [Set a whitelist](#).

Procedure

1. Log on to the [RDS console](#).
2. Select the region where the target instance is located.
3. Click the ID of the target instance to visit the Basic Information page.

4. In the Instance Distribution area, click Add Read-only Instance, as shown in the following figure.



5. On the purchasing page, choose the configuration of the read-only instance, and then click Buy Now.







Note:

- We recommend that the read-only instance and the master instance be in the same VPC.
- To guarantee sufficient I/O for data synchronization, we recommend that the configuration of the read-only instance (the memory) is not less than that of the master instance.
- We recommend that you purchase multiple read-only instances to improve availability.

6. Select Product Terms of Service and Service Level Notice and Terms of Use, and then click Pay Now.

7. After creating the read-only instance, you can view it on the Instances page, as shown in the following figure.

<input type="checkbox"/>	Instance Name	Status(All) ▼	Creation Time	Instance Type(All) ▼
<input type="checkbox"/>	 	Running	2017-07-26 16:24	Read-only
<input type="checkbox"/>	 	Running	2017-07-18 15:03	Regular

6 Stored procedures

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Copy a database in the instance

T-SQL

`sp_rds_copy_database`

Supported editions:

- High-Availability Edition
- Basic Edition

Description

Copies a database in an instance.



Note:

The remaining storage capacity of the instance must be at least 1.3 times the database size.

Method

```
EXEC sp_rds_copy_database 'testdb ','testdb_copy '
```

- The first parameter represents the source database.
- The second parameter represents the target database.

Bring a database online

T-SQL

sp_rds_set_db_online

Supported editions:

- High-availability Edition
- Basic Edition

Description

After you bring a database offline, you cannot directly bring it online by running the ALTER DATABASE statement. Use this stored procedure to bring a database online.

Method

```
EXEC sp_rds_set_db_online 'db '
```

The parameter represents the database to be brought online.

Set global database privileges

T-SQL

sp_rds_set_all_db_privileges

Supported editions:

- High-Availability Edition
- Basic Edition

Description

Grants the privileges of all or multiple databases to a user.



Note:

Your current database privileges must be higher or equal to the privileges you want to grant.

Method

```
sp_rds_set_all_db_privileges 'user ','db_owner ','db1 , db2 ...'
```

- The first parameter represents the user that you want to grant privileges to.
- The second parameter represents the database role to be granted to the user.

- The third parameter represents the databases. You can specify one or more databases, and separate multiple database databases with commas (,). (If the parameter is left blank, it indicates all user databases.)

Delete a database

T-SQL

`sp_rds_drop_database`

Supported editions:

High-Availability Edition



Note:

The Basic Edition currently does not support this stored procedure. For the Basic Edition, you can delete a database by running `DROP DATABASE db`.

Description

Delete a database from the instance. Dependent objects will be deleted when a database is deleted. The High-Availability Edition automatically deletes the mirror and terminates the database connection.

Method

```
EXEC sp_rds_dro p_database ' db '
```

The parameter represents the database to be deleted.

Set change tracking

T-SQL

`sp_rds_change_tracking`

Supported editions:

High-Availability Edition

Description

Sets change tracking for the database.

Method

```
EXEC sp_rds_cha nge_tracki ng ' db ', 1
```

- The first parameter represents the database name.

- The second parameter indicates whether change tracking is enabled.
 - 1: Enable.
 - 0: Disable.

Enable change data capture (CDC)

T-SQL

`sp_rds_cdc_enable_db`

Supported editions:

High-Availability Edition



Note:

If mirroring exists, this stored procedure also removes the availability group. In this case, this stored procedure is not recommended.

Description

Enables change data capture.

Method

```
USE db
GO
sp_rds_cdc _disable_d b
```

Disables change data capture

T-SQL

`sp_rds_cdc_disable_db`

Supported editions:

High-Availability Edition



Note:

If mirroring exists, this stored procedure also removes the availability group. In this case, this stored procedure is not recommended.

Description

Disables change data capture.

Method

```
USE db
GO
sp_rds_cdc _disable_d b
```

Configure instance parameters

T-SQL

sp_rds_configure

Supported editions:

- High-availability Edition
- Basic Edition

Description

Sets instance parameters. If your instance has primary and secondary nodes, the configuration is automatically synchronized from the primary node to the secondary node.

Parameters currently supported:

- fill factor (%)
- maximum worker threads
- cost threshold for parallelism
- max degree of parallelism
- min server memory (MB)
- max server memory (MB)
- blocked process threshold (s)

Method

```
EXEC sp_rds_configure 'max degree of parallelism', 4
```

- The first parameter represents the instance parameters to be set.
- The second parameter represents the instance parameter value.

Add a linked server

T-SQL

sp_rds_add_linked_server

Supported editions:

- SQL Server 2012/2016 Standard Edition High-Availability series
- SQL Server 2012/2016 Enterprise Edition High-Availability series

Description

Adds a linked server to the instance. Supports distributed transactions. The linked server created for both the primary and secondary nodes. If a switchover occurs, you do not need to add the link server again.

Method

```

DECLARE
@ linked_ser ver_name sysname = N ' yangzhao_s lb ',
@ data_sourc e sysname = N '****. sqlserver . rds . aliyuncs .
com , 3888 ', -- style : 10 . 1 . 10 . 1 , 1433
@ user_name sysname = N ' ay15 ',
@ password nvarchar ( 128 ) = N '*****',
@ source_use r_name sysname = N ' test ',
@ source_pas sword nvarchar ( 128 ) = N '*****',
@ link_serve r_options xml
= N '
        < rds_linked _server >
            < config option =" data access "> true </ config >
            < config option =" rpc "> true </ config >
            < config option =" rpc out "> true </ config >
        </ rds_linked _server >
    '

EXEC sp_rds_add _linked_se rver
@ linked_ser ver_name ,
@ data_sourc e ,
@ user_name ,
@ password ,
@ source_use r_name ,
@ source_pas sword ,
@ link_serve r_options

```

Set a trace flag**T-SQL statements****sp_rds_dbcc_trace****Supported editions:**

- High-availability Edition
- Basic Edition

Description

Sets trace flags for the instance. Only partial trace flags are currently supported. If your instance has primary and secondary nodes, the trace flags are automatically synchronized from the primary node to the secondary node.

Method

```
EXEC sp_rds_dbc c_trace ' 1222 ', 1 / 0
```

- The first parameter represents the trace flag.
- The second parameter indicates whether the trace flag is enabled or disabled.
 - 1: Enable.
 - 0: Disable.

Rename a database

T-SQL

sp_rds_rename_database

Supported editions:

Basic Edition

Description

Renames a database.



Note:

This stored procedure does not rename the physical database file.

Method

```
EXEC sp_rds_rename_database ' db ', ' new_db '
```

- The first parameter represents the database to be renamed.
- The second parameter represents the new name of the database.