Alibaba Cloud ApsaraDB for MySQL

Quick Start for SQL Server

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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 informatio n, 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 cd / d C :/ windows command to enter the Windows system folder.
Italics	It is used for parameters and variables.	bae log list instanceid <i>Instance_ID</i>
[] or [a b]	It indicates that it is a optional value, and only one item can be selected.	ipconfig [-all -t]

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

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1 Limits

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

Function	Cluster (AlawayOn) Edition	High-Availibility	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

Function	Cluster (AlawayOn) Edition	High-Availibility	Basic Edition	
	2017 Enterprise	2016 Standard/ Enterprise 2012 Standard/ Enterprise	2008 R2 Enterprise	2016 Web 2012 Web/ Enterprise
Chage Tracking	Supported	Supported	Supported	Supported
Windows domain account login	Not supported	Not supported	Not supported	Not supported
SQL Server Integration Services (SSIS)				
SQL Server Analysis Services (SSAS)				
SQL Server Reporting Services (SSRS)				
R Services				
Common Language Runtime (CLR)				
Asynchronous communicat ion				
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 General process

This Quick Start describes the procedure from purchasing an RDS instance to using it.

Quick Start flowchart



- 1. Create an RDS for SQL Server instance
- 2. Configure a whitelist
- 3. Apply for an Internet address
- 4. Create databases and accounts for an RDS for SQL Server 2017 instance
 - Create databases and accounts for an RDS for SQL Server 2012 or 2016 instance
 - Create databases and accounts for an RDS for SQL Server 2008 R2 instance
- 5. Connect to an RDS for SQL Server instance

3 Create an RDS for SQL Server 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 topic describes how to use the RDS console to create an RDS for SQL Server instance. For more information about how to use APIs to create an RDS for SQL Server instance, see CreateDBInstance.

Prerequisites

You have registered an Alibaba Cloud account. For more information, see Sign up with Alibaba Cloud.

Precautions

- · Subscription instances cannot be converted to Pay-As-You-Go instances.
- Pay-As-You-Go instances can be converted to Subscription instances. For operation instructions, see Change the billing method.
- An Alibaba Cloud account can create up to 30 Pay-As-You-Go RDS instances. You can open a ticket to apply for increasing the limit.

Procedure

- 1. Log on to the RDS console.
- 2. On the Instances page, click Create Instance.
- 3. Select a billing method:
 - Pay-As-You-Go: indicates post payment (billed by hour). For short-term requirements, create Pay-As-You-Go instances because they can be released at any time to save costs.
 - Subscription: indicates prepayment. You need to pay when creating an instance.
 For long-term requirements, create Subscription instances because they are more cost-effective. Furthermore, the longer the subscription, the higher the discount.

4.	Set the fo	llowing	parameters.
----	------------	---------	-------------

Parameter	Description
Region	Indicates the location of the RDS instance you want to purchase. You cannot change the region once you confirm your order.
	 Select the region closest to your users to increase the access speed. Select the region where your ECS instance is located so that the ECS instance can access the RDS instance through the intranet. If the ECS instance and RDS instance are located in different regions, they can communicate only through the Internet and hence performance is degraded.
Database Engine	The supported database engines are MySQL, Microsoft SQL Server, PostgreSQL, PPAS (compatible with Oracle), and MariaDB TX.
	In this example, select Microsoft SQL Server.
	Note: The available database engines vary depending on the region you select.
Version	For RDS for SQL Server, the supported versions are SQL Server 2017, 2016, 2012, and 2008 R2. For more information, see Functions supported by different editions of SQL Server.
	Note: The available versions vary depending on the region you select.

Parameter	Description
Edition	 Basic: This edition provides a single node and separates computing from storage. It is extremely cost-effective. High-availability: This edition adopts the high-availability architecture with one master node and one slave node. It is applicable to over 80% of scenarios. AlwaysOn: This edition provides one master node, one slave node, and up to seven read-only nodes that horizontally scale read capabilities.
	Note: The available product series vary depending on the region you select. For more information on the product series, see Product series overview.
Zone	A zone is a physical area within a region. Different zones in the same region are basically the same. You can deploy the master and slave nodes of your RDS instance in the same zone or in different zones.
Network Type	 Classic Network: indicates the traditional network. VPC (recommended): short for Virtual Private Cloud. A VPC is an isolated network environment and therefore provides higher security and performance than the classic network.
	Note: Make sure the network type of the RDS instance is the same as that of your ECS instance so that the ECS instance can access the RDS instance through the intranet.

Parameter	Description
Туре	Indicates the specifications of the RDS instance. Each instance type supports a specific number of CPU cores, memory size, maximum number of connections, and maximum IOPS. For more information, see Instance type list. RDS for SQL Server supports the following instance type families :
	 General-purpose instance: owns dedicated memory and I/ O resources, but shares CPU and storage resources with the other general-purpose instances on the same server. Dedicated instance: owns dedicated CPU, memory, storage, and I/O resources. Dedicated host: owns all the CPU, memory, storage, and I/O resources on the server where it is located.
	For example, 8 Cores 32 GB (Basic) indicates a general-purpose instance, and 8 Cores 32 GB (Dedicated) indicates a dedicated instance.
Capacity	Used for storing data, system files, binlog files, and transaction files.

5. Set the duration (only for Subscription instances) and quantity, and click Buy Now.

Note:

For a Subscription instance, you can:

- Select Auto Renew in the Duration section. Then the system can automatically deduct fees from your account to extend the validity period of your instance.
 For example, if you purchase a three-month Subscription instance with Auto Renew selected, the system automatically deducts frees of three months when the instance is about to expire.
- · Click Add to Cart and then click the cart to place the order.
- 6. On the Order Confirmation page, review the order information, select the terms and agreements as prompted, click Pay Now, and complete the payment.

What to do next

1. In the upper left corner of the RDS console, select the region where the instance is located, and view the instance details.

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ApsaraDB for RDS	RI	OS insta	Asia Pacific China (Hangzhou)	Europe & Americas Germany (Frankfurt)	istics. You	u can save data by	OpenAPI for long-term queries						Ign	ore
Instances	R	OS Mai	China (Shanghai) China (Qingdao)	UK (London)				Learning Pa	th Log On	to DB	C Refr	resh Cr	eate Insta	ance
Cross-region Backup	в	asic Inf	China (Beijing)	US (Virginia)										
Locked Instances (0)	In	stance	China (Zhangjiakou)	Middle East & India									0	2
			China (Hohhot)	💶 India (Mumbai)										
		Insta	China (Shenzhen)	UAE (Dubal)		Zone	Network Type(All) 👻	Billing .	IOPS Tags Utilization				A	ction
			China (Chengdu)		•			Mediod	(%) 🔷					
			Hong Kong		2017	China	VPC	Dev. A.						
			Singapore Singapore		SON	(Hangzhou) ZoneH	(VPC:vpc-	You-Go	0			Man	age M	ore
			Australia (Sydney))							
			Malaysia (Kuala Lumpur)			China	VPC ()/PC/mpc	Day Ac						
6			💻 Indonesia (Jakarta)			(Hangzhou) ZoneH	(VPC.VpC*	You-Go	0	Man	age Su	ubscription Bil	ling M	ore •
			 Japan (Tokyo))							

- 2. Configure a whitelist.
- 3. Create accounts.
- 4. Apply for an Internet address (if you want to access the RDS instance through the Internet).
- 5. Connect to the RDS instance.

APIs

API	Description
CreateDBInstance	Used to create an RDS instance.

4 Initial configuration

4.1 Configure a whitelist

After you create an RDS instance, you must configure a whitelist to allow external devices to access the instance. The default whitelist contains only 127.0.0.1. Before you add new IP addresses to the whitelist, no devices are allowed to access the RDS instance.

A whitelist can be used to improve the security of your RDS instance. We recommend that you update the whitelist on a regular basis. Configuring whitelists does not affect the normal operation of the RDS instance.

Precautions

- The default whitelist can only be edited or cleared. It cannot be deleted.
- If you log on to DMS but your IP address has not been added to the whitelist, DMS will prompt you to add the IP address, and will automatically generate a whitelist containing your IP address.

Procedure

- 1. Log on to the ApsaraDB for RDS console.
- 2. In the upper-left corner of the page, select the region where the instance is located.



- 3. Find the instance and click its ID.
- 4. In the left-side navigation pane, click Data Security.
- 5. On the Whitelist Settings tab page, click Edit corresponding to the default whitelist.



You can click Create Whitelist to create a whitelist.



- 6. In the displayed Edit Whitelist dialog box, specify the IP addresses or CIDR blocks used to access the instance, and then click OK.
 - If you specify the CIDR block 10.10.10.0/24, any IP addresses in the 10.10.10.*X* format are allowed to access the RDS instance.
 - To add multiple IP addresses or CIDR blocks, separate each entry with a comma (without spaces), for example, 192.168.0.1,172.16.213.9.
 - After you click Add Internal IP Addresses of ECS Instances, the IP addresses of all the ECS instances under your Alibaba Cloud account are displayed. You can quickly add internal IP addresses to the whitelist.



After you add an IP address or CIDR block to the default whitelist, the default address 127.0.0.1 is automatically deleted.

Edit Whitelist		\times
Network Type:	VPC Classic Network/Public IP	
Whitelist Name*:	default	
Whitelist*:	127.0.0.1	
	Add Internal IP Addresses of ECS Instances You can add 999 more entries.	
	Specified IP address: If you specify the IP address 192.168.0.1, this IP address is allowed to access the RDS instance. Specified CIDR block: If you specify the CIDR block 192.168.0.0/24, the IP addresses ranging from 192.168.0.1 to 192.168.0.255 are allowed to access the RDS instance. When you add multiple IP addresses or CIDR blocks, separate them by a comma (no space after the comma), for example, 192.168.0.1,192.168.0.0/24. How to Locate the Local IP Address	
	New whitelist entries take effect in 1 minute.	
	ОК Са	ncel

Common errors

- · The default address 127.0.0.1 in Data Security > Whitelist Settings indicates that no device is allowed to access the RDS instance. Therefore, you need to add IP addresses of devices to the whitelist to allow access to the instance.
- The IP address in the whitelist is set to 0.0.0.0, but the correct format is 0.0.0/0.



0.0.0/0 indicates that all devices are allowed to access the RDS instance. Exercise caution when using this IP address.

• The public IP address that you add to the whitelist may not be the real egress IP address. The reasons are as follows:

- The public IP address is not fixed and may dynamically change.
- The tools or websites used to query the public IP addresses provide wrong IP addresses.

APIs

API	Description
DescribeDBInstanceIPArrayList	Used to view the IP address whitelist of an RDS instance.
ModifySecurityIps	Used to modify the IP address whitelist of an RDS instance.

4.2 Apply for an Internet address

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

Intranet and Internet addresses

Address Type	Description
Intranet address	 The intranet address is generated by default. Use the intranet address if all of the following conditions are met: 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 network type as your RDS instance. The intranet address is recommended because accessing RDS through the intranet is most secure and delivers optimal performance.

Address Type	Description
Internet address	 You need to manually apply for the Internet address. You can also release it anytime. Use the Internet address if you cannot access RDS through the intranet. Specific scenarios are as follows: 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.
	 Note: 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, we recommend 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.

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.

= C-) Alibaba	a Clou	d	China (Hangzhou) 🔺					Q B	illing M	anagement I	4ore [5	â	English	0
ApsaraDB for RDS	RDS	insta	Asia Pacific China (Hangzhou)	Europe & Americas Germany (Frankfurt)	istics. You	u can save data by C	DpenAPI for long-term queries.							Ignor	е
Instances	RD	5 Mai	China (Shanghai) China (Qingdao)	🚼 UK (London) 🔤 US (Silicon Valley)				Learning	Path	Log On to Di	8 2	Refrest	Crea	te Instan	ce
Cross-region Backup Locked Instances (0)	Bas	sic Inf ance	China (Beijing) China (Zhangjiakou)	📟 US (Virginia) Middle East & India										٥	<u>2</u>
		Insta	China (Hohhot) China (Shenzhen)	 India (Mumbai) UAE (Dubai) 	.	Zone	Network Type(All) 👻	Billing Method	Tags	IOPS Utilization				Acti	ions
			China (Chengdu)		2017	China	VPC (VPC:vpc-	Pay-As-		(%)•					
		K	Singapore Australia (Sydney)		SON	(Hangzhou) ZoneH)	You-Go		0			Manag	e More	•
			 Malaysia (Kuala Lumpur) Indonesia (Jakarta) 			China (Hangzhou) ZoneH	VPC (VPC:vpc-	Pay-As- You-Go		0	Manage	Subs	cription Billin	g More	e 🕶
			 Japan (Tokyo) 				,								

- 3. Find the RDS instance and click its ID.
- 4. In the left-side navigation pane, click Database Connection.

5. Click Apply for Public Endpoint.

<	(Running) 18ack to Instance List	ation Guide	Log On to DB	Create Data Migration Task	Restart Instance	Back Up Instance	C Refresh	:=
Basic Information	Connection Options							
Accounts								
Databases	Instance Connection							
Database Migration t	Database Connection		How to connect t	to RDS 📀 Switch to Classic Ne	twork Change Endp	point Apply for Publi	ic Endpoint	^
Database Connection	Network Type: VPC (VPC:		Internal Endpoint					
Monitoring and Alert	Internal Port: 3433							
Data Security	Management Studio Connection Mode (server name):							
Service Availability								
Logs	Connection Architecture					Other Connection A	rchitecture	^

6. In the displayed dialog box, click OK.

The Internet address is generated.

- 7. Optional. To modify the Internet address or port number, click Change Endpoint. In the displayed dialog box, select a connection type, set the Internet address and port number, and click OK.
 - Connection Type: Select Public Endpoint.



The Public Endpoint option is available only after you have applied for the Internet address.

- Endpoint: The address contains 8 to 64 characters, including letters, digits, and hyphens (-). The address prefix must start with a lowercase letter.
- Port: The port number can be modified only when the RDS network type is classic network.

Change Endpoint	\times
Connection Type:	Internal Endpoint
Endpoint:	rm-1udka9920x4ss6gp9 .sqlserver.rds.aliyuncs.com
	Starts with a lower-case letter, consists of 8 to 64 characters, including letters, digits, or hyphen (-).
Port:	3433
	Port Range: 1000 to 5999
	OK Cancel

APIs

API	Description
AllocateInstancePublicConnection	Used to apply for an Internet address.

4.3 Creating accounts and databases

4.3.1 Create databases and accounts for an RDS for SQL Server 2017 instance

For an RDS for SQL Server 2017 instance, you need to create an account from the RDS console, and then use the client or DMS to create and manage the database.



This topic is applicable only to RDS for SQL Server 2017 instances. For instances of other SQL Server versions, see Create databases and accounts for an RDS for SQL Server 2012 or 2016 instance and Create databases and accounts for an RDS for SQL Server 2008 R2 instance.

Precautions

- Databases within the same instance share all the resources of the instance. You can manage standard accounts and databases by using SQL statements.
- When assigning permissions to database accounts, follow the principle of least privilege and create accounts based on the roles required. Assign the appropriat e level of permissions to the accounts. When necessary, you can create multiple database accounts and allow each of them to access data relevant to their own business tasks. If an account does not need to write data to a database, assign readonly permissions to the account.
- For database security, you must set strong account passwords and change the passwords regularly.

Procedure

- 1. Log on to the RDS console.
- 2. Select the region where the instance is located.



- 3. Find the instance and click its ID.
- 4. In the left-side navigation pane, click Accounts.
- 5. Click Create Initial Account.

6. Enter the account information.

<	👻 Indi Jihaji (R	Running) t Back to Instance List	Operation Guide Log C	In to DB Create Data Migration Task	Restart Instance	Back Up Instance	C Refresh
Basic Information	Accounts						
Accounts							
Database Connection	Accounts						
Monitoring and Alert	Create Account << Back to Accounts						
Data Security							
Service Availability	*Database Account:	An account name must be 1 to 16 characters in length and car	contain lower care latters, num	have and underscored (). It must start with a	lattor and and with a		
Backup and Restorati		letter or a number.	Contain Ioner-Case letters, num	bers, and underscores (_), it must start with a			
Cluster management	*Password:						
		Your password must be 8 to 32 characters in length, including	at least three of the following typ	pes: upper-cse letters, lower-case letters, num	bers, and special		
		characters, such as !@#\$%^&*()_+-=.					
	*Re-enter Password:						
		OK Cancel					

Parameter description:

• Database Account: the name of the initial account. It must be 2 to 16 characters in length, and can contain lowercase letters, digits, and underscores (_). It must start with a letter and end with a letter or digit.

Note:

Reserved keywords such as test and root cannot be set as account names.

- Password:
 - The password must be 8 to 32 characters in length.
 - The password must contain at least three of the following types of characters: uppercase letters, lowercase letters, digits, and special characters.
 - The allowed special characters are as follows:

!@#\$%^&*()_+-=

- Re-enter Password: Enter the password again to make sure you enter the correct password.
- 7. Click OK.
- 8. Click Log On to DB in the upper-right corner to go to the RDS Database Logon page of the Data Management Service console.

- 9. Enter the correct IP address, port number, database username, and password.
 - · Parameter description:
 - 1: The IP address and port information of the instance. You can view the IP address and port information on the Basic Information page or Database Connection page.

Basic Information		
Accounts	Basic Information	Configure Whitelist
Database Connection	Instance ID: rm-	Instance Name: m
Monitoring and Alert	Region and Zone: China (Hangzhou)ZoneH	Instance Type & Edition: Primary Instance (AlwaysOn)
Data Security	Internal IP Address: rm sqlserver.rds.aliyuncs.com	Internal Port: 1433

- 2: The name of the account to access the database.
- 3: The password of the account.

10.Click Log On.

Note:

If you want your browser to remember your account and password, you can select Remember Password before you click Log On.

11.If the system displays a message, asking you to add the CIDR block of the DMS server to the IP address whitelist of the RDS instance, click Set a Whitelist. For more information, see Configure a whitelist.

12.After the whitelist is configured, click Log On.

13.After you have logged on to the RDS instance, choose SQL Operations > SQL Window in the top navigation bar.

14.In the SQL window, run the following statement to create a database:

create database < database name >;

15.Click execute.

16.In the SQL window, run the following statement to create a standard account:

CREATE LOGIN < login name > WITH PASSWORD = '< password
>';

17.Click execute.

Note:

Standard accounts that are created in DMS by using T-SQL do not appear in the account list in the console. However, you can use a standard account to log on to the database.

18.In the SQL window, run the following statements to create a database user and associate the user to the standard account that you just created.

USE < database name >; CREATE USER < user name > FOR LOGIN < login name >;

19.Click execute. The standard account can access the corresponding database.

FAQ

Can I manage the created account in the read-only instances?

The account created in the master instance is synchronized to the read-only instances

. You cannot manage the account in the read-only instances. The account can only

read data from the read-only instances.

APIs

API	Description
CreateAccount	Used to create an account.
CreateDatabase	Used to create a database.

4.3.2 Create databases and accounts for an RDS for SQL Server 2012 or 2016 instance

This topic is applicable only to RDS for SQL Server 2012 and 2016 instances. For more information on how to create databases and accounts for other versions, see Create databases and accounts for an RDS for SQL Server 2017 instance and Create databases and accounts for an RDS for SQL Server 2008 R2 instance.

Create an account

You can create a superuser account and standard accounts through the console. The superuser account can be created only through the console.

Precautions

 When assigning permissions to database accounts, follow the principle of least privilege and create accounts based on the roles required. Assign the appropriat e level of permissions to the accounts. When necessary, you can create multiple database accounts and allow each of them to access data relevant to their own business tasks. If an account does not need to write data to a database, assign readonly permissions to the account. • For database security, you must set strong account passwords and change the passwords regularly.

Procedure

- 1. Log on to the RDS console.
- 2. In the upper-left corner, select the region where the target instance is located.

= C-) Alibaba	Cloud	China (Hangzhou) 🔺					Q Billin	g Management	More 🛌	۵ å	ት Englis	sh 🌔
ApsaraDB for RDS	RDS insta	Asia Pacific China (Hangzhou)	Europe & Americas Germany (Frankfurt)	istics. You (can save data by O	penAPI for long-term queries.					Igr	nore
Instances	RDS Mai	China (Shanghai) China (Qingdao)	UK (London)				Learning Path	Log On to D	B C Re	fresh	Create Inst	tance
Cross-region Backup	Basic Inf	China (Beijing)	US (Virginia)									
Locked Instances (0)	Instance	China (Zhangjiakou) China (Hohhot)	Middle East & India								0	2
	🔲 Insta	China (Shenzhen)	UAE (Dubai)	Ŧ	Zone	Network Type(All) 👻	Billing Method Ta	IOPS Utilization (%) ♦			A	Actions
	R	Hong Kong Singapore Australia (Svdnev)		2017 50N	China (Hangzhou) ZoneH	VPC (VPC:vpc-)	Pay-As- You-Go	0		м	anage M	fore 🗸
Ξ		 Malaysia (Kuala Lumpur) Indonesia (Jakarta) Japan (Tokyo) 			China (Hangzhou) ZoneH	VPC (VPC:vpc-	Pay-As- You-Go	0	Manage S	Subscription	Billing M	tore 👻

- 3. Find the target instance and click its ID.
- 4. In the left-side navigation pane, click Accounts.
- 5. Click Create Account.
- 6. Enter the account information and click OK.

Parameter	Description
Database Account	The account name contains 2 to 16 characters, including lowercase letters, digits, and underscores (_). It must begin with a letter and end with a letter or digit.
Account Type	 Superuser Account: This option is available only when you create an account for the first time. You can create standard accounts only after you create a superuser account. Each instance has only one superuser account and this superuser account cannot be deleted. Standard Account: This option is available only after you create a superuser account. One instance can have multiple standard accounts. You must assign database permissions to standard accounts manually.
Password	The password contains 8 to 32 characters, including at least three of the following types of characters: uppercase letters, lowercase letters , digits, and special characters. The allowed special characters are as follows: ! @ # \$ % ^ & * () _ + - =

Parameter	Description
Re-enter password	Enter the password again.

Create a database

- 1. Log on to the RDS console.
- 2. In the upper-left corner, select the region where the target instance is located.

= C-) Alibaba	Cloud	China (Hangzhou) 🔺					Q Billin	g Management	More 🛌 💪		English	0
ApsaraDB for RDS	RDS insta	Asia Pacific China (Hangzhou)	Europe & Americas	istics. You o	can save data by C	OpenAPI for long-term queries.					Ignore	
Instances Cross-region Backup	RDS Mar Basic Inf	China (Shanghai) China (Qingdao) China (Beijing)	UK (London) US (Silicon Valley) US (Virginia)				Learning Pati	Log On to Di	3 C Refres	Create	e Instance	
Locked Instances (0)	Instance	China (Zhangjiakou)	Middle East & India								o <u>a</u>	1
	🔲 Insta	China (Shenzhen) China (Chengdu)	UAE (Dubal)	. i	Zone	Network Type(All) 👻	Billing Ta Method Ta	IOPS Utilization (%) ♦			Actions	44
		 Hong Kong Singapore Australia (Sydney) 		2017 50N	China (Hangzhou) ZoneH	VPC (VPC:vpc-)	Pay-As- You-Go	0		Manage	More -	
Ξ		 Malaysia (Kuala Lumpur) Indonesia (Jakarta) Japan (Tokyo) 			China (Hangzhou) ZoneH	VPC (VPC:vpc-)	Pay-As- You-Go	0	Manage Subs	cription Billing	More 🗸	

- 3. Find the target instance and click its ID.
- 4. In the left-side navigation pane, click Databases.
- 5. Click Create Database.
- 6. Set the following parameters and click OK.

Parameter	Description
Database Name	The database name contains 2 to 64 characters including lowercase letters, digits, underscores (_), and hyphens (-). It must begin with a letter and end with a letter or digit.
Supported Character Set	Select a character set. If the character set you need is not listed, click All and select it from the drop-down list.
Authorized Account	Select the account to which you want to assign permissions. After you select an account, the Account Type parameter is displayed and you can set it to Read/Write, Read-only, or Owner. If no accounts have been created, you can leave the Authorized Account parameter blank.
Remarks	Optional. Enter the other account information that helps to better manage the account. You can enter up to 256 characters.

APIs

API	Description
CreateAccount	Used to create an account.
CreateDatabase	Used to create a database.

4.3.3 Create databases and accounts for an RDS for SQL Server 2008 R2 instance

This topic is applicable only to RDS for SQL Server 2008 R2 instances. For more information on how to create databases and accounts for other versions, see Create databases and accounts for an RDS for SQL Server 2017 instance and Create databases and accounts for an RDS for SQL Server 2012 or 2016 instance.

Create an account

Precautions

- You can create up to 500 accounts for each RDS for SQL Server 2008 R2 instance.
- To migrate data from a local database to RDS, you need to create databases and accounts that are the same as those of the local database.
- When assigning permissions to database accounts, follow the principle of least privilege and create accounts based on the roles required. Assign the appropriat e level of permissions to the accounts. When necessary, you can create multiple database accounts and allow each of them to access data relevant to their own business tasks. If an account does not need to write data to a database, assign readonly permissions to the account.
- For database security, set strong passwords for the accounts and change the passwords regularly.

Procedure

1. Log on to the RDS console.

2. In the upper-left corner, select the region where the target instance is located.

= (-) Alibaba	Cloud	China (Hangzhou) 🔺					Q Billi	ng Management	More 🛌	<u>م</u> 4	English	(
ApsaraDB for RDS	RDS insta	Asia Pacific China (Hangzhou)	Europe & Americas Germany (Frankfurt)	istics. You	can save data by	OpenAPI for long-term queries.					Ignore	
Instances	RDS Ma	China (Shanghai)	UK (London)				Learning Pa	th Log On to	DB C I	Refresh C	eate Instance	
Cross-region Backup	Basic Inf	China (Beijing)	US (Virginia)									
Locked Instances (0)	Instance	China (Zhangjiakou)	Middle East & India								0 ž	:
	Inst	China (Shenzhen) China (Chengdu)	UAE (Dubai)	Ŧ	Zone	Network Type(All) 👻	Billing . Method	IOPS Tags Utilization (%) ♦			Actions	5
		Hong Kong Singapore Australia (Sydney)		2017 SON	China (Hangzhou) ZoneH	VPC (VPC:vpc-)	Pay-As- You-Go	0		Ma	iage More -	
I		 Malaysia (Kuala Lumpur) Indonesia (Jakarta) Japan (Tokyo) 			China (Hangzhou) ZoneH	VPC (VPC:vpc-)	Pay-As- You-Go	0	Manage	Subscription B	lling More 🗸	

- 3. Find the target instance and click its ID.
- 4. In the left-side navigation pane, click Accounts.
- 5. Click Create Account.

Basic Information	Accounts					
Accounts						
Databases	Accounts	Service Account Permissions				
Database Migration t						Refresh Create Account
Database Connection	Account	Account Type	Status	Database	Description	Actions
Monitoring and Alert			① Could not find an	record that met the co	ndition	
Data Security			Codd not ning an	record diat met die co	and to the	

6. Enter the account information.

Accounts	Service Account Permissions						
Create Aco	ount << Back to Accounts						
	*Database Account:						
		An account name must be 1 to 10	6 characters in	length and can contain lower	-case letters, numbers, and	l underscores (_). It must start with a	letter and end with a letter or a num
	Authorized Databases:	Unauthorized Databases		Authorized Databases:		Permission Full Control Read/Write	
		No data available.	Add >		No data available.		
			< Remove				
	*Password:						
		Your password must be 8 to 32 c	haracters in le	ngth, including at least three	of the following types: uppe	er-cse letters, lower-case letters, numl	pers, and special characters, such as
	*Re-enter Password:						
	Note:						
		Your note can contain up to 256	alphanumeric	//			
		·····					
		OK Cancel					

Parameter	Description
Database Account	The account name contains 2 to 16 characters, including lowercase letters, digits, and underscores (_). It must begin with a letter and end with a letter or digit.

Parameter	Description				
Authorized Databases	Select the databases for which the account has permissions. If no databases have been created, you can leave this parameter blank.				
	An account can be authorized with multiple databases. To authorize an account to databases, take these steps:				
	 a. In the left area, select the target databases. b. Click Add to add the selected databases to the right area. c. Set the account's permission on each database, which can be Read/ Write or Read-only. You can also click the button (for example, Full Control Read-only) in the upper-right corner to set the permissions for the databases in batches. 				
	Add > < Remove				
Password	The password contains 8 to 32 characters, including at least three of the following types of characters: uppercase letters, lowercase letters , digits, and special characters. The allowed special characters are as follows: $!@#$%^&*()_+=$				
Re-enter Password	Enter the password again.				
Note	Optional. Enter the other account information that helps to better manage the account. You can enter up to 256 characters.				

7. Click OK.

Create a database

You can create up to 50 databases for an RDS for SQL Server 2008 R2 instance.

- 1. Log in to the RDS console.
- 2. In the upper-left corner, select the region where the target instance is located.
- 3. Find the target instance and click its ID.
- 4. In the left-side navigation pane, click Databases.

5. Click Create Database.

Basic Information	Databases 🎯					Create Database Copy Database
Databases	Database Name	Database Status	Character Set	User Account	Description	Actions
Database Migration t	database_03	Running	SQL_Latin1_General_CP1_CI_AS		None	Delete Migrate Backup Files from OSS
Database Connection	database_02	Running	Chinese_PRC_CS_AS		None	Delete Migrate Backup Files from OSS
Data Security	database_01	Running	Chinese_PRC_CI_AS		None	Delete Migrate Backup Files from OSS
Service Availability	test_01	Running	Chinese_PRC_CI_AS		None	Delete Migrate Backup Files from OSS

6. Enter the database information.

*Database Name:	Your database name can be 2 to 64 characters in length, and can contain lowercase letters, digits, underscores, and hyphens. It must start with a letter a letter or a digit.
*Supported Character Set:	Chinese_PRC_CI_AS Chinese_PRC_CS_AS SQL_Latin1_General_CP1_CI_AS SQL_Latin1_General_CP1_CS_AS Chinese_PRC_BIN all Chinese_PRC_CI_AS
Authorized Account:	Unauthorized Account (default) Create an Account
Remarks:	
	The note must be 0 to 256 characters in length.
	OK Cancel

Parameter	Description
Database Name	The database name contains 2 to 64 characters, including lowercase letters, digits, underscores (_), and hyphens (-). It must begin with a letter and end with a letter or digit.
Supported Character Set	Select a character set. If the character set you need is not listed, click All and select it from the drop-down list.
Authorized Account	Select the account to which you want to assign permissions. If no accounts have been created, you can leave this parameter blank.
Account Type	This parameter is displayed after you select an authorized account. You can set this parameter to Read/Write or Read-only.
Remarks	Optional. Enter the other account information that helps to better manage the account. You can enter up to 256 characters.

7. Click OK.

Resources

Migrate full backup data to RDS for SQL Server 2008 R2

APIs

API	Description
CreateAccount	Used to create an account.
CreateDatabase	Used to create a database.

5 Connect to an RDS for SQL Server instance

After you create an instance, configure a whitelist, and create a database and an account, you can use Data Management Sevice (DMS) or other database clients to connect to the RDS instance.

Use DMS to connect to an instance

DMS is a graphical data management service provided by Alibaba Cloud. It can be used to manage non-relational databases and relational databases, and supports data and schema management, user authorization, security audit, data trends, data tracking, BI charts, and performance and optimization.

For more information, see Use DMS to log on to an RDS instance.

Use a client to connect to an instance

This topic describes how to use the Microsoft SQL Server Management Studio (SSMS) client to connect to an RDS instance.

- 1. Start the SSMS client in an ECS instance or your computer.
- 2. Choose Connect > Database Engine.
- 3. In the displayed Connect to Server dialog box, enter the logon information.

🖵 Connect to Server	
	SQL Server
Server type:	Database Engine 🔹
Server name:	▼
Authentication:	SQL Server Authentication 🔹
Login:	▼
Password:	
	Remember password
	Connect Cancel Help Options >>

Parameter	Description
Server type	Select Database Engine.

Parameter	Description							
Server name	Enter the connection address and the p RDS instance. Separate the address an with a comma (,), such as rm - bptes rds . aliyuncs . com , 3433 . The following procedure shows how to and public addresses and the port nur instance: a. Log on to the ApsaraDB for RDS con b. In the upper-left corner of the page where the instance is located. c. Click the ID of the instance. d. Find the internal IP address and port public IP address and port number in the Basic Information section, as following figure.	port number of the d the port number st . sqlserver . o view the internal mber of the RDS asole. , select the region rt number, or the of the instance shown in the						
Authentication	Select SQL Server Authentication.							
Login	Enter the account name of the RDS instance.							
Password	Enter the password of the account of the	he RDS instance.						

4. Click Connect.

6 Read-only instances

6.1 Introduction to SQL Server 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.



- For RDS SQL Server, only the SQL Server 2017 Cluster (AlwaysOn) Edition supports read-only instances.
- · Each read-only instance adopts a single-node architecture (without slave nodes).

The following topology shows the positioning of the read-only instance.



Pricing

The billing method of read-only instances is Pay-As-You-Go. The following table lists the prices of common instances.

Hourly prices of specifications and storage

Region	rds. mssql. s2.large 2-core 4 GB \$0.225	rds. mssql .s2. xlarge 2-core 8 GB \$0.447	rds. mssql. s3.large 4-core 8 GB \$0.459	rds.mssql .m1. medium 4-core 16 GB \$0.851	rds. mssql. c1.large 8-core 16 GB \$0.888	rds. mssql .c1. xlarge 8-core 32 GB \$1.732	rds. mssql .c2. xlarge 16-core 64 GB \$3.389	Storage \$0.0003
mainian 's regions	a							/GB
Hong Kong	\$0.264	\$0.522	\$0.537	\$0.993	\$1.035	\$2.02	\$3.954	\$0.0004 /GB
US (Virginia)	\$0.273	\$0.542	\$0.556	\$1.028	\$1.072	\$2.093	\$4.096	\$0.0003 /GB
US (Sillicon Vally)	\$0.292	\$0.579	\$0.595	\$1.099	\$1.146	\$2.237	\$4.378	\$0.0003 /GB
Singapor	\$ 0.311	\$0.616	\$0.632	\$1.170	\$1.220	\$2.381	\$4.661	\$0.0004 /GB
Australia	\$0.315	\$0.622	\$0.646	\$1.209	\$1.259	\$2.415	\$4.829	\$0.0005 /GB
Malaysia	\$0.296	\$0.586	\$0.601	\$1.112	\$1.159	\$2.262	\$4.428	\$0.0004 /GB
Indonesi	a\$0.311	\$0.616	\$0.632	\$1.170	\$1.220	\$2.381	\$4.661	\$0.0004 /GB
Japan	\$0.311	\$0.615	\$0.632	\$1.171	\$1.221	\$2.381	\$4.660	\$0.0005 /GB
Germany (Frankfur)	r\$0.311 rt	\$0.615	\$0.632	\$1.171	\$1.221	\$2.381	\$4.660	\$0.0005 /GB
UK (London)	\$0.311	\$0.615	\$0.632	\$1.171	\$1.221	\$2.381	\$4.660	\$0.0005 /GB

Region	rds.	rds.	rds.	rds.mssql	rds.	rds.	rds.	Storage
	mssql.	mssql	mssql.	.m1.	mssql.	mssql	mssql	
	s2.large	.s2.	s3.large	medium	c1.large	.c1.	.c2.	
	2-core 4	xlarge	4-core 8	4-core 16	8-core	xlarge	xlarge	
	GB	2-core 8	GB	GB	16 GB	8-core	16-core	
		GB				32 GB	64 GB	
UAE (Dubai)	\$0.327	\$0.646	\$0.665	\$1.230	\$1.283	\$2.500	\$4.895	\$0.0007 /GB
India (Mumbai)	\$0.296	\$0.586	\$0.601	\$1.112	\$1.159	\$2.262	\$4.428	\$0.0004 /GB

Features

Read-only instances offer the following features:

- Account and database management: No account or database maintenance is required for a read-only instance. Both the account and database are synchronized through the master instance.
- Billing: Read-only instances support billing measured per hour, which is userfriendly and cost-efficient.
- Specifications: The specifications of a read-only instance can differ from those of the master instance, and can be changed at any time. It is recommended that the specifications of the read-only instance be equal to or higher than those of the master instance; otherwise the read-only instance may have high latency or workloads.
- Network type: can differ from that of the master instance.
- Whitelist: When a read-only instance is created, it automatically copies the whitelist of the master instance. However, the whitelist of the read-only instance is independent from that of the master instance. You can modify the whitelist of the read-only instance by referring to Configure a whitelist.
- Monitoring and alarms: 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.

Restrictions

· Quantity of read-only instances:

Database	Quantity
SQL Server	Up to 7 read-only instances can be created for each master instance.

- · Read-only instances do not support backup settings or manual backup.
- Instance recovery:
 - Read-only instances do not support the creation of temporary instances through backup files or a 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.

6.2 Create an RDS for SQL Server read-only instance

You can create read-only instances to handle large numbers of read requests and increase the application throughput. A read-only instance is a read-only replica of the master instance. Changes to the master instance are automatically synchronized to all read-only instances attached to the master instance.

For more information, see Introduction to SQL Server read-only instances.

Prerequisites

The master instance adopts the Cluster Edition and runs the SQL Server 2017 engine.

Precautions

- You can only create read-only instances under the master instance but cannot switch an existing instance to a read-only instance.
- Creating a read-only instance does not affect the master instance because the readonly instance copies data from the slave instance.
- You can create up to seven read-only instances for the master instance.
- A read-only instance is charged according to the Pay-As-You-Go billing method. That is, fees are deducted once per hour, and the deducted fees vary depending on the specifications of the read-only instance at the time of fee deduction. For more information, see the "Pricing" section in Introduction to SQL Server read-only instances.

Create a read-only instance

- 1. Log on to the RDS console.
- 2. In the upper-left corner, select the region where the target instance is located.

= C-J Alibaba	a Cloud	China (Hangzhou) 🔺					Q Bi	lling M	anagement	More 📐	Δ	ά E	nglish 🥊
ApsaraDB for RDS	RDS inst	Asia Pacific China (Hangzhou)	Europe & Americas Germany (Frankfurt)	istics. You	can save data by	OpenAPI for long-term queries.						[Ignore
Instances	RDS Ma	China (Shanghai)	🗱 UK (London) 📒 US (Silicon Valley)				Learning F	Path	Log On to D	в С	Refresh	Create	Instance
Cross-region Backup	Basic Ir	nf 🞦 China (Beijing)	US (Virginia)										
Locked Instances (0)	Instance	China (Zhangjiakou)	Middle East & India										o 2
	Ins	China (Shenzhen) China (Chengdu)	UAE (Dubal)	÷	Zone	Network Type(All) 👻	Billing Method	Tags	IOPS Utilization (%) ♦				Actions
	R	Hong Kong Singapore Australia (Sydney)		2017 50N	China (Hangzhou) ZoneH	VPC (VPC:vpc-)	Pay-As- You-Go		0			Manage	More 👻
		 Malaysia (Kuala Lumpur) Indonesia (Jakarta) Japan (Tokyo) 			China (Hangzhou) ZoneH	VPC (VPC:vpc-)	Pay-As- You-Go		0	Manage	Subscript	tion Billing	More 👻

3. Find the target instance and click the instance ID.

4. Click Add Read-only Instance.

<	(Running) tBack to Instance List	Op	eration Guide	Log On to DB	Create Data Migratio								
Basic Information													
Accounts	Basic Information	Cor	nfigure Whitelist	Migrate Across	Zones								
Databases	Instance ID:		Instance Name	9:	/								
Database Connection	Region and Zone: China (Hangzhou)ZoneH	Region and Zone: China (Hangzhou)ZoneH av											
Database Proxy	Internal Endpoint: Configure Whitelist to view the internal IP address.	Internal Endpoint: Configure Whitelist to view the internal IP address. Internal Port: 3306											
Monitoring and Alert	Public Endpoint: Apply for Public Endpoint												
Data Security	Storage Type: Local SSD												
Service Availability	Read/Write Splitting Address: Apply for a Read/Writer Splitting Address												
Logs													
SQL Explorer	Status												
Backup and Restorati	Status: Running	Billing Method: Pay	-As-You-Go										
Parameters													
	Configuration Information												
	Type Family: General-purpose	Type Family: General-purpose Database Engine: MySQL 5.7											
	Mermory: 1024MB	Maximum IOPS: 60	0										
	Maintenance Window: 02:00-06:00 Configure	Type Code: rds.my	sql.t1.small										

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



- 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 greater than or equal to that of the master instance.
- We recommend that you purchase multiple read-only instances based on your business needs to improve availability.
- 6. On the Order Confirmation page, review the order information, select the terms and agreements as prompted, click Pay Now, and complete the payment.

The instance creation takes a few minutes.

View a read-only instance

View a read-only instance in the instance list

- 1. Log on to the RDS console.
- 2. Select the region where the read-only instance is located.

= C-) Alibaba	Clo	ud	China (Hangzhou) 🔺					Q Bi	ling M	anagement N	lore 🛌	۵	ක En	nglish
ApsaraDB for RDS	R	DS insta	Asia Pacific China (Hangzhou)	Europe & Americas Germany (Frankfurt)	istics. You	u can save data by C	DpenAPI for long-term queries.							Ignore
Instances	RI	DS Mai	China (Shanghai) China (Qingdao)	🗱 UK (London) 📒 US (Silicon Valley)				Learning P	ath	Log On to DE	0	Refresh	Create I	Instance
Cross-region Backup	E	Basic Inf	China (Beijing) China (Zhangjiakou)	US (Virginia)										
LOCKed Instances (0)	In	istance	China (Hohhot)	Middle East & India India (Mumbai)						TOPS				0 2
		Insta	China (Chengdu)	UAE (Dubai)	*	Zone	Network Type(All) 👻	Billing Method	Tags	Utilization (%) •				Actions
		R	Hong Kong		2017 SON	China (Hangzhou) ZoneH	VPC (VPC:vpc-	Pay-As- You-Go		0			Manage	More 🗸
Ξ			 Australia (Sydney) Malaysia (Kuala Lumpur) 			China) VPC							
			 Indonesia (Jakarta) Japan (Tokyo) 			(Hangzhou) ZoneH	(VPC:vpc-	Pay-As- You-Go		0	Manage	Subscriptio	yn Billing	More 🗸

3. In the instance list, find the read-only instance and click its ID.

	Instance Name	Instance Status(All) 👻	Creation Time	Instance Type(All) +	Database Engine(All) 👻	Zone	Network Type(All) 👻	Billing Method	Tags	IOPS Utilization (%) ●			Actions
		Running	Jul 17, 2019, 16:50	Read-only Instance	SQL Server 2017 EE ALWAYSON	China (Hangzhou) ZoneH	VPC (VPC:vpc- bp1w92wjrgz01fm6pubd8)	Pay-As- You-Go		0		Manage	More 👻
		Running	Jul 17, 2019, 11:35	Primary Instance	SQL Server 2016 SE	China (Hangzhou) ZoneH	VPC (VPC:vpc- bp1w92wjrgz01fm6pubd8)	Pay-As- You-Go		0	Manage	Subscription Billing	More 👻
	۵.	Running	Jul 17, 2019, 11:34	Primary Instance	SQL Server 2017 EE ALWAYSON	China (Hangzhou) ZoneH	VPC (VPC:vpc- bp1w92wjrgz01fm6pubd8)	Pay-As- You-Go		0	Manage	Subscription Billing	More 👻

View a read-only instance on the Basic Information page for the master instance

- 1. Log on to the RDS console
- 2. Select the region where the master instance is located.



3. In the instance list, find the master instance and click its ID.

	Instance Name	Instance Status(All) 👻	Creation Time	Instance Type(All) 👻	Database Engine(All) 👻	Zone	Network Type(All) 👻	Billing Method	Tags	IOPS Utilization (%) ●		Actions
	B Linkston,	Running	Jul 17, 2019, 16:50	Read-only Instance	SQL Server 2017 EE ALWAYSON	China (Hangzhou) ZoneH	VPC (VPC:vpc- bp1w92wjrgz01fm6pubd8)	Pay-As- You-Go		0	Manage 1	More 👻
		Running	Jul 17, 2019, 11:35	Primary Instance	SQL Server 2016 SE	China (Hangzhou) ZoneH	VPC (VPC:vpc- bp1w92wjrgz01fm6pubd8)	Pay-As- You-Go		0	Manage Subscription Billing M	More 👻
	а сана с	Running	Jul 17, 2019, 11:34	Primary Instance	SQL Server 2017 EE ALWAYSON	China (Hangzhou) ZoneH	VPC (VPC:vpc- bp1w92wjrgz01fm6pubd8)	Pay-As- You-Go		0	Manage Subscription Billing 1	More 👻

4. On the Basic Information page of the master instance, move the pointer over the number below Read-only Instance and click the ID of the read-only instance.

Basic Information		
Accounts	Basic Information	Configure Whitelist
Database Connection	Instance ID: rm-1ud129vj0g55xs41l	Instance Name: rm-1ud129vj0g55xs411 🖍
Monitoring and Alert	Region and Zone: China (Hangzhou)ZoneH	Instance Type & Edition: Primary Instance (AlwaysOn)
Data Security	Internal Endpoint: Configure Whitelist to view the internal IP address.	Internal Port: 1433
Service Availability	Storage Type: SSD	
Backup and Restorati	Read-only Address: Configure Whitelist to view the internal IP address.	Read-Only Port: 1433
Cluster management	Advanced Feature: Linked Server, Distributed Transaction	Character Set: Chinese_PRC_CI_AS

View a read-only instance on the Cluster management page

Prerequisites

You have enabled read/write splitting on the Cluster management page. For more information, see Enable read/write splitting.



1. Log on to the RDS console.

2. Select the region where the master instance is located.

		<u> </u>	(nungenou) -									, ,	00 0	
	RDS in:	ata A	Isia Pacific	Europe & Americas	istics. You can save data by OpenAPI for long-term q		OpenAPI for long-term queries.							Ignor
saraDB for RDS			China (Hangzhou)	Germany (Frankfurt)										
	RDS Ma	ai 🕻	China (Shanghai)	UK (London)				Learning P	ath	Log On to DB	0	Refresh	Create	Instar
istances		1	China (Qingdao)	US (Silicon Valley)										
ross-region Backup	Basic 1	inf 🚦	China (Beijing)	US (Virginia)										
ocked Instances (0)	Testaes	-	China (Zhangjiakou)	Middle East 9 Judia										*
	Instant	•	China (Hohhot)	India (Mumbai)										Ŷ
			China (Shenzhen)	UAE (Dubai)		7000	Network Turno(All) -	Billing	Tags	IOPS				
	China (Chengdu)	China (Chengdu)		*	20116	несногк туре(ні) +	Method	Tays	(%) •					
			Hong Kong			China	VPC							
	R		Singapore		2017 50N	(Hangzhou)	(VPC:vpc-	Pay-As- You-Go		0			Manage	I N
			Australia (Sydney)			Zonen)							
Ξ		8	Malaysia (Kuala Lumpur)			China	VPC							
		L,	Indonesia (Jakarta)			(Hangzhou)	(VPC:vpc-	Pay-As- You-Go		0	Manage	Subscriptio	n Billing	I N

- 3. In the instance list, find the master instance and click its ID.
- 4. In the left-side navigation pane, click Cluster management.
- 5. Find the read-only instance and click its ID.

Basic Information	T	Basic Information					Co	nfigure Readonly Splitting Address	Disable Readonly Spli	itting Address	^		
Accounts Read-only address Point 1433													
Database Connection	Network Type Intranet address (VPC) VPC							(Hold Science)					
Monitoring and Alert	Weight Distribution Mode Automatic Distribution Number of Involved Instances 1												
Data Security	Master instance												
Backup and Restorati	T	Instances									~		
Cluster management													
-		InstanceId	Status	Read Weight Distribution	Specification		Region and Zone	VSwitch		Actio	ons		
		e laterietett	Running	400	Type: rds.mssql.s2.large Capacity: 150G		China (Hangzhou)ZoneH		-	Manage	9		

View the delay time of a read-only instance

When a read-only instance synchronizes data from the master instance, the read-only instance may lag behind the master instance by a small amount of time. You can view the delay on the Basic Information page of the read-only instance.

😵 🔹 🚛 (Running) 🏦 Back to Instance List	0 sDelay	Operation Guide	Log On to DB	Create Data Migration Task	Restart Instance	C Refresh	:=
· · · · · · · · · · · · · · · · · · ·							

APIs

API	Description
CreateReadOnlyDBInstance	Used to create an RDS read-only instance.

7 Stored procedures

- Copy a database in an instance
- Bring a database online
- Set global database privileges
- Delete a database
- Set change tracking
- Enable change data capture
- Disable change data capture
- Configure instance parameters
- Add a linked server
- Set a trace flag
- Rename a database

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.



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

Method

EXEC sp_rds_cop y_database ' testdb ',' testdb_cop y '

- 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.



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

Method

```
sp_rds_set _all_db_pr ivileges ' 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



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



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



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
- \cdot 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_con figure ' max degree of parallelis m ', 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
<pre>@ 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</pre>
@ user_name sysname = N ' ay15 ' , @ password nvarchar (128) = N '*****', @ source_use r_name sysname = N ' test ',
<pre>@ source_pas sword nvarchar (128) = N '*****', @ link_serve r_options xml = N '</pre>
<pre>< rds_linked _server ></pre>
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 proceudre does not rename the physical database file.

Method

EXEC sp_rds_ren ame_databa se 'db', 'new_db'

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