

RDS for SQL Server

Getting Started

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1 (Recommended) Buying an RDS for SQL Server Instance and Connecting to It Through DAS

This example illustrates how to purchase an RDS for SQL Server instance and how to connect to it using DAS.

- [Step 1: Create an RDS for SQL Server Instance](#)
- [Step 2: Connect to the RDS for SQL Server Instance](#)

Step 1: Create an RDS for SQL Server Instance

1. Go to the [Buy DB Instance](#) page.
2. Configure the instance information and click **Next**.

Figure 1-1 Setting the billing mode, DB engine, storage type, and instance type

The screenshot displays the configuration interface for creating an RDS for SQL Server instance. The settings are as follows:

- Billing Mode:** Yearly/Monthly (selected), Pay-per-use
- Region:** (Dropdown menu)
- DB Instance Name:** rds-9548
- DB Engine:** MySQL, PostgreSQL, Microsoft SQL Server (selected)
- DB Engine Version:** 2019 Enterprise Edition, 2019 Standard Edition, 2019 Web Edition, 2017 Enterprise Edition, 2017 Standard Edition, 2017 Web Edition, 2016 Enterprise Edition, 2016 Standard Edition, 2016 Web Edition
- Service Provider:** (Dropdown menu)
- DB Instance Type:** Cluster
- Storage Type:** Ultra-High I/O
- Primary AZ:** cn-north-4a, cn-north-4b, cn-north-4c, AZ7
- Standby AZ:** cn-north-4a, cn-north-4b, cn-north-4c, AZ7
- Time Zone:** (UTC+08:00) Beijing, Chongqing, Hong Kong, ...
- Server Collation:** Chinese_PRC_90_CI_AS

Figure 1-2 Selecting an instance class

Instance Class

General-enhanced

General-enhanced II

vCPU Memory	IPv6
<input checked="" type="radio"/> 2 vCPUs 8 GB (exclusive)	Supported
<input type="radio"/> 2 vCPUs 16 GB (exclusive)	Not supported
<input type="radio"/> 4 vCPUs 8 GB (exclusive)	Supported
<input type="radio"/> 4 vCPUs 16 GB (exclusive)	Supported
<input type="radio"/> 4 vCPUs 32 GB (exclusive)	Not supported
<input type="radio"/> 8 vCPUs 32 GB (exclusive)	Supported

DB Instance SpecificationsGeneral-enhanced II | 2 vCPUs | 8 GB (exclusive)

40 GB

Storage Space (GB)

40

800

1,550

2,300

4,000

40

+

RDS provides free backup storage space of the same size as your purchased storage space. After the free backup space is used up, charges are applied based on the [OBS pricing details](#).

Disk Encryption

Disable

Recommended Enable

Figure 1-3 Configuring network details

Relationship among VPCs, subnets, security groups, and DB instances

VPC

default_vpc

default_subnet(192.168.0.0/24)

Automatically-assigned IP address

View In-use IP Address

After the RDS instance is created, the VPC cannot be changed. ECSs in different VPCs cannot communicate with each other by default. If you want to create a VPC, go to the VPC console. Available Private IP Addresses: 250

Security Group

default_securitygroup

View Security Group

Security Group Rules

Figure 1-4 Setting a password

Password

Configure

Skip

Administrator

rdsuser

Administrator Password

Keep your password secure. The system cannot retrieve your password.

Confirm Password

Parameter Template

Default-Microsoft SQL Server-2019_EE

View Parameter Template

Tag

It is recommended that you use TMS's predefined tag function to add the same tag to different cloud resources. [View predefined tags](#)

Tag key

Tag value

You can add 10 more tags.

Quantity

1

+

The total number of primary DB instances and read replicas cannot exceed 49. [Increase quota](#)

3. View the purchased RDS instance.

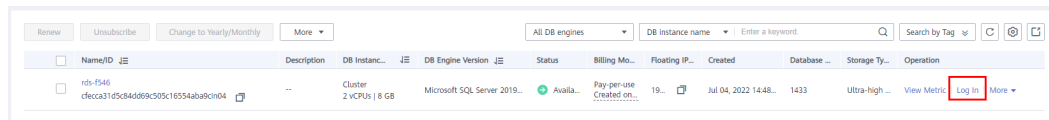
Figure 1-5 Instance successfully purchased

<div>Renew</div>	<div>Unsubscribe</div>	<div>Change to Yearly/Monthly</div>	<div>More</div>	<div>All DB engines</div>	<div>DB Instance name</div>	<div>Enter a keyword</div>	<div>Search by Tag</div>	<div></div>	<div></div>	<div></div>
Name/ID	Description	DB Instanc...	DB Engine Version	Status	Billing Mo...	Floating IP...	Created	Database ...	Storage Ty...	Operation
<div><input type="checkbox"/></div> <div>rds-4546</div> <div>28209d6962c40d3afa7c12d334ac3e3in04</div>	--	Cluster 2 vCPUs 8 GB	Microsoft SQL Server 2019...	<div>Availa...</div>	Pay-per-use Created on...	19...	Jun 27, 2022 16:0...	1433	Ultra-high ...	View Metric Log In More

Step 2: Connect to the RDS for SQL Server Instance

1. Click **Log In** in the **Operation** column.

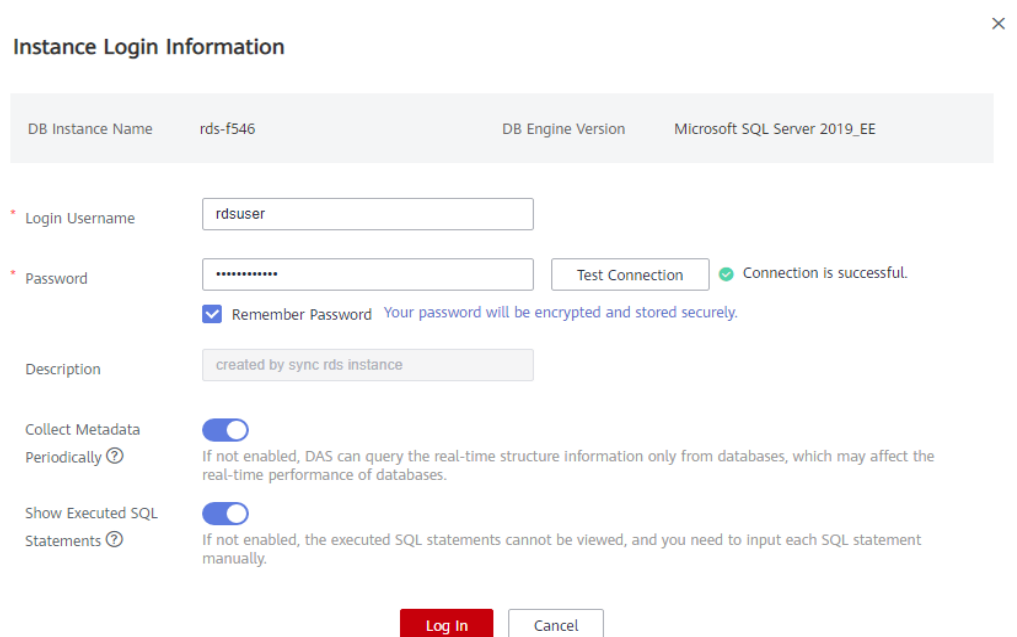
Figure 1-6 Instances



	Name/ID	Description	DB Instance...	DB Engine Version	Status	Billing Mo...	Floating IP...	Created	Database ...	Storage Ty...	Operation
<input type="checkbox"/>	rds-f546 cfeca37d5cd4dd69c505c16554aba8cm04	--	Cluster 2 vCPUs 8 GB	Microsoft SQL Server 2019...	Availa...	Pay-per-use Created on...	19...	Jul 04, 2022 14:48...	1433	Ultra-High ...	View Metric Log In More ▾

2. Enter the **rdsuser** password you set during instance creation and click **Log In**.

Figure 1-7 Instance login



Instance Login Information ✕

DB Instance Name	rds-f546	DB Engine Version	Microsoft SQL Server 2019_EE
------------------	----------	-------------------	------------------------------

* Login Username

rdsuser

* Password

Test Connection

Connection is successful.

☒ Remember Password

Your password will be encrypted and stored securely.

Description

created by sync rds instance

Collect Metadata Periodically ⓘ

☒ If not enabled, DAS can query the real-time structure information only from databases, which may affect the real-time performance of databases.

Show Executed SQL Statements ⓘ

☒ If not enabled, the executed SQL statements cannot be viewed, and you need to input each SQL statement manually.

Log In

Cancel

3. Create a database named **my_db**.

Figure 1-8 Creating a database

Create Database

Name :

my_db

Recovery Mode :

Full

Compatibility Level :

Microsoft SQL Server 2019(150)

Containment Type :

None

Database Read-Only :

False

Allow Snapshot Isolation :

False

Microsoft SQL Server 2012 (11.x) and later versions support the containment type.

Database Files

Add

Delete

	Logical Name	File Type	Initial Size	Autogrowth	Maximum Size
1	my_db	Rows	5 MB	Increase by MB 200	Unlimited
2	my_db_log	Log	1 MB	Increase by MB 200	Unlimited

OK

Cancel

4. Click the database name and select a schema, for example, **guest**.

Figure 1-9 Switching to the database

Schemas

Objects

Metadata Collection

Data records displayed on this page are refreshed in real time (up to 10,000 records can be displayed).

Tables

Views

Stored Procedures

Db Triggers

Functions

Schema:

dbo

+ Create Table

Schema

dbo

guest

db_accessadmin

db_backupoperator

db_datareader

db_datawriter

db_ddladmin

db_denydatareader

5. Create a table named **table1**.

Figure 1-10 Table information

The screenshot shows the 'Create Table' wizard in the AWS Management Console. The 'Basic Information' tab is selected. The form contains the following fields:

- Table Name:** table1
- Schema:** guest
- Table Lock Escalation:** TABLE
- Comment:** (empty text area)

A 'Next' button is located at the bottom right of the form.

6. Define table fields, including **Column Name**, **Type**, **Nullable**, and **Primary Key**, and click **Create**.

Figure 1-11 Inserting data

The screenshot shows the 'Create Table' wizard in the AWS Management Console, Step 2: Column. The table lists the following columns:

No.	Column Name	Type	Nullable	Primary Key
1	PersonID	int	<input type="checkbox"/>	<input type="checkbox"/>
2	Name	nvarchar(50)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

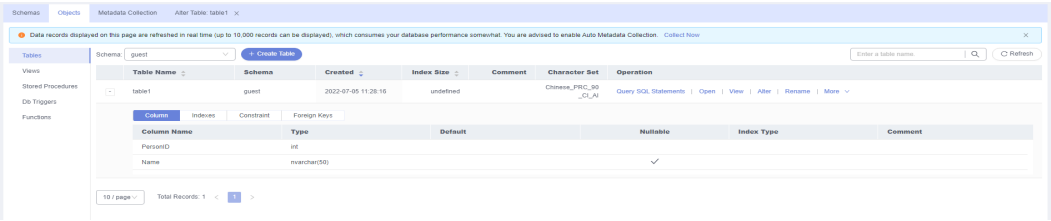
The 'Extended Information' section on the right contains the following fields:

- Default:** Fill in Manually
- Comment:** (empty text area)
- Length:** 50

Buttons for 'Previous', 'Next', and 'Create' are at the bottom.

Check the created table.

Figure 1-12 Table successfully created



2 Buying an RDS for SQL Server Instance and Connecting to It Using the SSMS Client

You can connect to your DB instance using a Windows ECS with SQL Server Management Studio (SSMS) installed over a private network.

This section describes how to connect to a DB instance with SSL disabled. To connect to a DB instance with SSL enabled, see [Connecting to an RDS for SQL Server Instance Through a Private Network](#).

Step 1: Buy an ECS

1. [Log in to the management console](#) and check whether there is an ECS available.
 - If there is a Windows ECS, go to [3](#).
 - If no Windows ECS is available, go to [2](#).

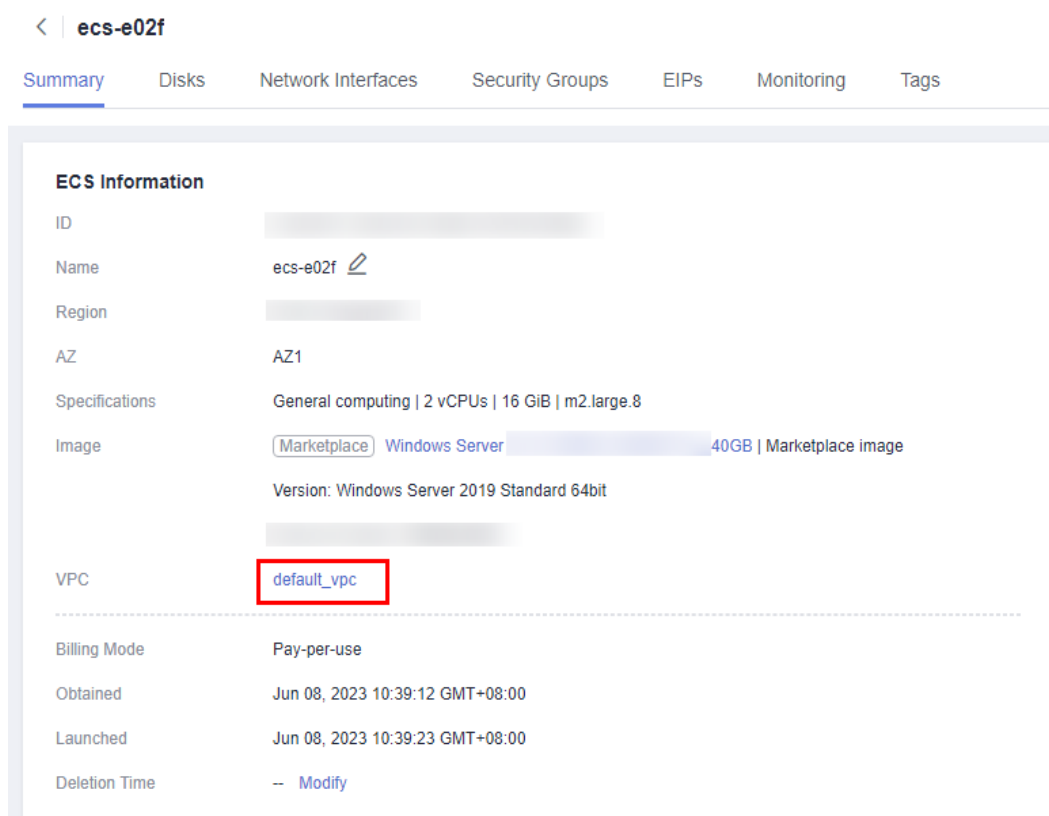
Figure 2-1 ECS

<input type="checkbox"/>	Name/ID	Monitor...	Security	AZ	Status	Specifications/Image	IP Address	Billing Mode	Enterprise...	Tag	Operation
<input type="checkbox"/>	ecs-e02f				Running	2 vCPUs 16 GiB m2.large.8 Marketplace Windows Server 2...	(EIP) 1 Mbit/s 192.168.6.115 (Private IP)	Pay-per-use	default	–	Remote Login More

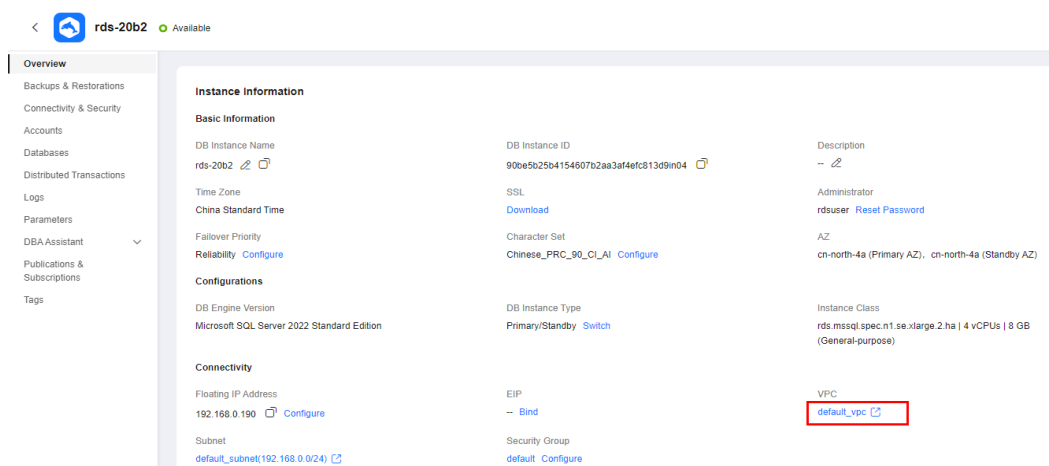
2. Buy an ECS and select Windows as its OS.

To download SQL Server Management Studio to the ECS, bind an EIP to the ECS. The ECS must be in the same region, VPC, and security group as the RDS for SQL Server DB instance for mutual communications.

For details about how to purchase a Windows ECS, see [Purchasing a Custom ECS](#) in *Elastic Cloud Server User Guide*.
3. On the **ECS Information** page, view the region and VPC of the ECS.

Figure 2-2 ECS information

4. On the **Overview** page of the RDS for SQL Server instance, view the region and VPC of the DB instance.

Figure 2-3 Overview

5. Check whether the ECS and RDS for SQL Server instance are in the same region and VPC.
 - If yes, go to **Step 2: Test Connectivity and Install SQL Server Management Studio**.
 - If they are not in the same region, purchase another ECS or DB instance. The ECS and DB instance in different regions cannot communicate with

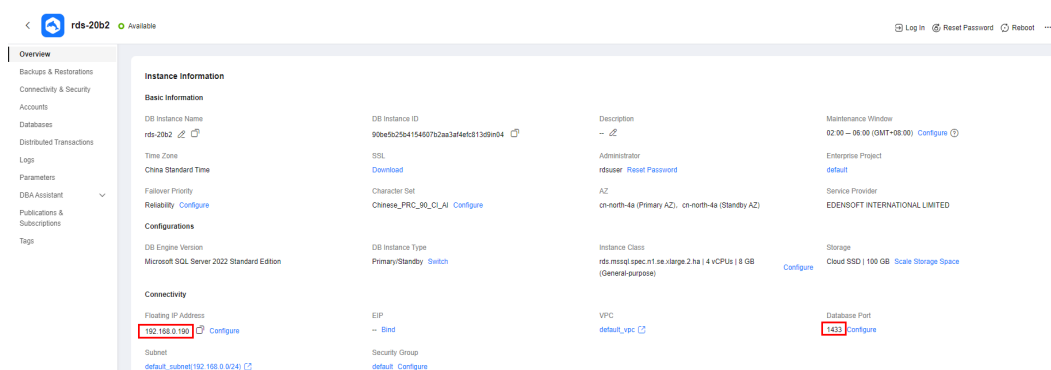
each other. To reduce network latency, deploy your DB instance in the region nearest to your workloads.

- If the ECS and DB instance are in different VPCs, change the VPC of the ECS to that of the DB instance. For details, see [Changing a VPC](#).

Step 2: Test Connectivity and Install SQL Server Management Studio

1. Log in to the ECS. For details, see [Login Using VNC](#) in the *Elastic Cloud Server User Guide*.
2. On the **Instances** page of the RDS console, click the DB instance name to go to the **Overview** page.
3. Obtain the floating IP address and database port of the DB instance.

Figure 2-4 Connection information

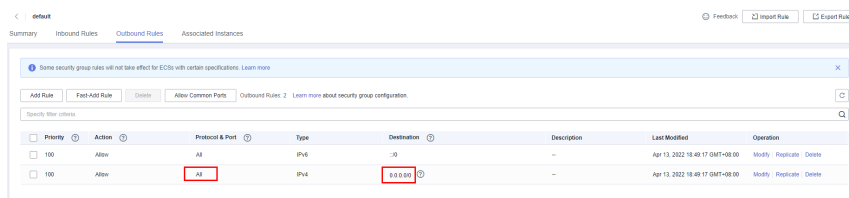


4. Open the cmd window on the ECS and check whether the floating IP address and database port of the DB instance can be connected.

telnet 192.168.2.182 1433

- If yes, network connectivity is normal.
- If no, check the security group rules.
 - If in the security group of the ECS, there is no outbound rule with **Destination** set to **0.0.0.0/0** and **Protocol & Port** set to **All**, add an outbound rule for the floating IP address and port of the DB instance.

Figure 2-5 ECS security group



- If in the security group of the DB instance, there is no inbound rule allowing the access from the private IP address and port of the ECS, add an inbound rule for the private IP address and port of the ECS.
5. Open a browser on the ECS, visit the [Microsoft website](#), and download the installation package, for example, SQL Server Management Studio 18.0.

6. Double-click the installation package and complete the installation as instructed.

Step 3: Connect to the DB Instance Using SQL Server Management Studio

1. Start SQL Server Management Studio.
2. Choose **Connect > Database Engine**. In the displayed dialog box, enter login information.

Figure 2-6 Connecting to the server

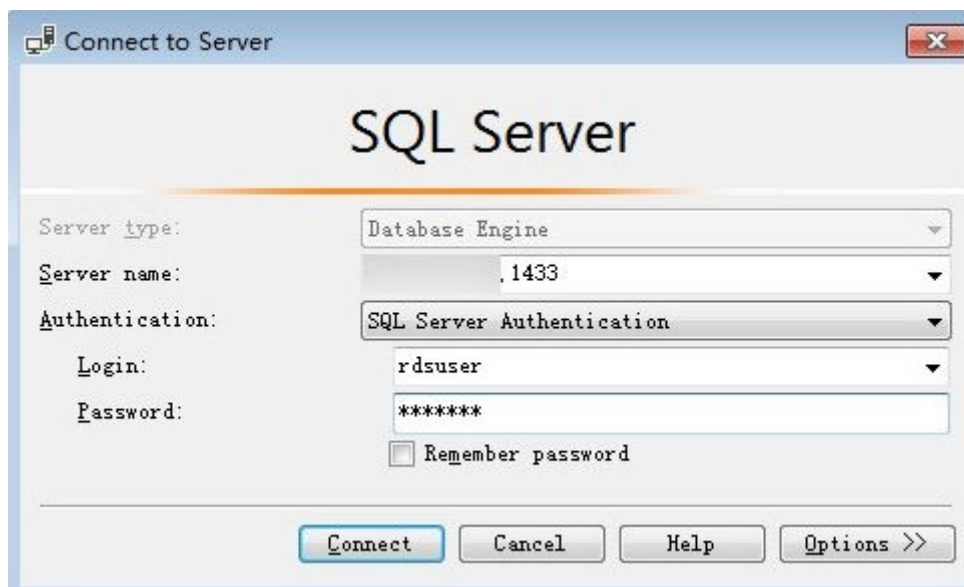


Table 2-1 Parameter description

Parameter	Description
Server name	Floating IP address and database port obtained in 3 .
Authentication	Authentication mode. Select SQL Server Authentication .
Login	Name of the account used to access the DB instance. The default value is rdsuser .
Password	Password of the account.

3. Click **Connect** to connect to the DB instance.

Follow-up Operations

After logging in to the DB instance, you can create or migrate databases.

- [Managing RDS for SQL Server Databases Using DAS](#)
- [Migration Solution Overview](#)

3

Getting Started with RDS for SQL Server Common Practices

After purchasing and connecting to a DB instance, you can view common practices to better use RDS for SQL Server.

Table 3-1 Common practices

Practice		Description
Suggestions on using RDS for SQL Server	Instance Usage Suggestions	This practice provides suggestions on DB instance class, database connection, database migration, and instance usage.
SSRS deployment	Deploying SQL Server Reporting Services (SSRS) on RDS for SQL Server	This practice describes how to deploy SSRS on RDS for SQL Server.
Data migration	Migrating Data to RDS for SQL Server Using the Export and Import Functions of DAS	This practice describes how to use Data Admin Service (DAS) to export data from the source and then import the data to an RDS for SQL Server DB instance.
	Migrating Data from an ECS-Hosted SQL Server Database to RDS for SQL Server Using the Export and Import Functions of SSMS	This practice describes how to use SQL Server Management Studio (SSMS) to migrate data from an ECS-hosted SQL Server database to an RDS for SQL Server DB instance.
	Migrating Data from an On-Premises SQL Server Database to RDS for SQL Server Using the Export and Import Functions of SSMS	This practice describes how to use SSMS to migrate data from an on-premises SQL Server database to an RDS for SQL Server DB instance.

Practice		Description
	Deploying SQL Server Reporting Services (SSRS) on RDS for SQL Server	This practice describes how to deploy SSRS on RDS for SQL Server.
	Migrating Backup Data of an RDS for SQL Server DB Instance to Another RDS for SQL Server DB Instance	This practice describes how to use DRS to migrate backup data from the source to an RDS for SQL Server DB instance.
	From RDS for SQL Server to RDS for SQL Server	This practice describes how to use DRS to synchronize data from an RDS for SQL Server DB instance to another RDS for SQL Server DB instance.
	Migrating Backup Data of an On-Premises SQL Server Database to an RDS for SQL Server DB Instance	This practice describes how to use DRS to migrate backup data of an on-premises SQL Server database to an RDS for SQL Server DB instance.
	From On-Premises SQL Server to RDS for SQL Server	This practice describes how to use DRS to synchronize data from an on-premises SQL Server database to an RDS for SQL Server DB instance.
	Migrating Backup Data of SQL Server Databases on Other Clouds to RDS for SQL Server	This practice describes how to use DRS to migrate backup data of SQL Server databases on other clouds to RDS for SQL Server.
	From SQL Server on Other Clouds to RDS for SQL Server	This practice describes how to use DRS to synchronize data from SQL Server databases on other clouds to RDS for SQL Server.
Data backup	Same-Region Automated Backup	This practice describes how RDS for SQL Server automatically creates backups for a DB instance during a backup window and saves the backups based on the configured retention period.
	Same-Region Manual Backup	This practice describes how to create manual backups for a DB instance. These backups can be used to restore data for improved reliability.

Practice		Description
Data restoration	Restoring from Full Backups to RDS for SQL Server Instances	This practice describes how to use an automated or manual backup to restore a DB instance to how it was when the backup was created. The restoration is at the instance level.
	Restoring a DB Instance to a Point in Time	This practice describes how to use an automated backup to restore instance data to a specified point in time.