#### **Data Replication Service**

#### **Backup Migration**

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### Migration Overview

It often becomes necessary to hide the real IP address of your database for the sake of security. Migrating data through direct connections is an option, but costly. DRS supports backup migration, which allows you to export data from your source database for backup and upload the backup files to OBS. Then, you can restore the backup files to the destination database to complete the migration. Using this method, data migration can be realized without exposing your source databases.

You can use backup migration when you want to migrate on-premises databases to the cloud.

Without connecting to your sources, DRS can help you complete data migration.

#### Figure 1-1 Backup migration process



#### Supported Database Types

**Table 1-1** lists the source database and destination database types supported by DRS in backup migration.

Table 1-1	Migration	schemes
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Backup File	Destination DB	Documentation
Full backup file of RDS for SQL Server	RDS for SQL Server	Creating an RDS Backup Migration Task
Backup files o f on- premises and other cloud Microsoft SQL Server		Creating a Backup Using OBS Buckets

## **2** Creating an RDS Backup Migration Task

#### **Supported Source and Destination Databases**

#### Table 2-1 Supported databases

Source DB	Destination DB		
RDS for SQL Server full backup file	RDS for SQL Server		
<ul> <li>Microsoft SQL Server 2008 Enterprise Edition, Standard Edition, and Web Edition</li> </ul>	<ul> <li>Microsoft SQL Server 2008 Enterprise Edition, Standard Edition, and Web Edition (Existing versions)</li> </ul>		
<ul> <li>Microsoft SQL Server 2012 Enterprise Edition, Standard Edition, and Web Edition</li> </ul>	<ul> <li>Microsoft SQL Server 2012 Enterprise Edition, Standard Edition, and Web Edition</li> </ul>		
<ul> <li>Microsoft SQL Server 2014 Enterprise Edition, Standard</li> <li>Edition and Web Edition</li> </ul>	<ul> <li>Microsoft SQL Server 2014 Enterprise Edition, Standard Edition, and Web Edition</li> </ul>		
<ul> <li>Microsoft SQL Server 2016 Enterprise Edition, Standard</li> <li>Edition and Web Edition</li> </ul>	<ul> <li>Microsoft SQL Server 2016 Enterprise Edition, Standard Edition, and Web Edition</li> </ul>		
<ul> <li>Microsoft SQL Server 2017</li> <li>Enterprise Edition, Standard</li> <li>Edition, and Web Edition</li> </ul>	<ul> <li>Microsoft SQL Server 2017 Enterprise Edition, Standard Edition, and Web Edition</li> </ul>		
<ul> <li>Microsoft SQL Server 2019</li> <li>Enterprise Edition, Standard</li> <li>Edition, and Web Edition</li> </ul>	<ul> <li>Microsoft SQL Server 2019 Enterprise Edition, Standard Edition, and Web Edition</li> </ul>		
<ul> <li>Microsoft SQL Server 2022</li> <li>Enterprise Edition, Standard</li> <li>Edition, and Web Edition</li> </ul>	<ul> <li>Microsoft SQL Server 2022 Enterprise Edition, Standard Edition, and Web Edition</li> </ul>		

Source DB	Destination DB		
	ΝΟΤ	E	
	•	The major version of the destination database must be the same as or later than that of the source database.	
	•	The edition of the destination database must be the same as or later than that of the source database, for example, from Web Edition to Standard Edition, from Standard Edition to Enterprise Edition, or from Enterprise Edition to Enterprise Edition.	

#### Prerequisites

- You have logged in to the DRS console.
- Your account balance is greater than or equal to \$0 USD.
- For details about the supported DB types and versions, see **Supported Databases**.
- If a subaccount is used to create a DRS task, ensure that an agency has been added. For details about how to create an agency, see Agency Management.

#### **Before Backing Up File**

Learn the backup migration constraints before starting a migration task.

Scenario	Preparations
RDS full backup files	The source Microsoft SQL Server DB instance has full backups. If there are no full backups, create a full backup for the DB instance. For details, see <b>Creating a</b> <b>Manual Backup</b> in <i>Relational Database Service User</i> <i>Guide</i> .

#### Precautions

This section describes constraints on backup migrations of Microsoft SQL Server databases.

#### Table 2-3 Precautions

Туре	Restrictions
Database permissions	Before creating a backup migration task, ensure that the account has the permission to operate the RDS service.
	For details about RDS permissions and operations, see <b>RDS</b> Service Overview.
Backup database names	<ul> <li>Backup database names are case-insensitive, must be unique, and cannot be any of the following: <ul> <li>msdb</li> <li>master</li> <li>model</li> <li>tempdb</li> <li>rdsadmin</li> <li>resource</li> </ul> </li> </ul>
New database name	<ul> <li>The new database name must be unique and cannot be any of the following (case-insensitive): <ul> <li>msdb</li> <li>master</li> <li>model</li> <li>tempdb</li> <li>rdsadmin</li> <li>resource</li> </ul> </li> <li>The new database name contains 1 to 64 characters, including letters, digits, underscores (_), hyphens (-), and periods (.).</li> </ul>
Backup file sources	• RDS full backups: Backup files are manually or automatically created for RDS DB instances.

Туре	Restrictions
Precautions	• The available disk space of the destination database is at least 1.5 times the total data size of the backup database.
	<ul> <li>Backup database name is case-sensitive and must be the same as the database name in the backup file.</li> </ul>
	• Backup migration is not supported for a source database with TDE enabled.
	• The database backup file from a database of later version cannot be restored on the instance database of an earlier version (for example, restored from version 2017 to 2016).
	• The restoration from Enterprise Edition to Standard Edition to Web Edition may fail. That depends on whether the features of the later version are enabled.
	• During a migration, if <b>Overwrite Data</b> is set to <b>Yes</b> , high availability of the destination database is disabled by default. After the migration is complete, high availability is restored automatically.
	<ul> <li>During a migration, stop writing transactions to the destination database.</li> </ul>
	• If a primary/standby switchover of the destination database is performed, the backup migration fails. In this case, the migration task cannot be restored.

#### Procedure

This section describes how to create an RDS full backup migration task. You can use the full backups of Microsoft SQL Server DB instances in the cloud to migrate data.

- **Step 1** On the **Backup Migration Management** page, click **Create Migration Task**.
- **Step 2** On the **Select Backup** page, specify information about the task and backup files. Then, click **Next**.

# Region ... v Regions are geographic areas isolated from each other. For low network latency and quick resource access, select the nearest region. Project v \* Task Name DRS-6516 Description ③ 0255 0255

Figure 2-1 Task information

<b>Table 2-4</b> T	ask information
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Parameter	Description
Region	The region where your service is running. You can change the region. To reduce latency and improve access speed, select the region closest to your services.
Project	The project corresponds to the current region and can be changed.
Task Name	The task name must start with a letter and consist of 4 to 50 characters. It can contain only letters, digits, hyphens (-), and underscores (_).
Description	The description can contain up to 256 characters and cannot contain special characters !=<>&'\"

#### Figure 2-2 Backup file information

Backup File Information							
Database Typ	Microsoft SQL Server						
Backup File S	OBS Bucket RDS full backup ③						
* Enterprise Pro	ject -Select- V C View	Project Management ()					
Taps	Ets excennenced de pig una la TBD's prefetence las particulas la adri To adrá a lag, entre a las jeros ent a las solan brinos.           Entre a lag large         Entre a lag large           Tota can add 20 laga men laga.         Entre a lag inste	(the same lag is different cloud resources. View predictive) lags C			Ester	a DB instance name, Di Q	
	Backup Name	DB Instance Name/ID	DB Engine	Backup Start Time	Status	Size	
	sqiserver-rds	Sdoor-obs	SQL SERVER2017_EE	May 27, 2024 00:20:31 GMT+08:00	Completed	6.72MB	
	sqloerver-tds	rds-cob2	SQL SERVER2017_EE	May 26, 2024 00:20:31 GMT+00:00	Completed	6.57MB	
	sqiserver-riti-	Mis-coli2	SQL SERVER2017_EE	May 25, 2024 00:20:31 GMT+08:00	Completed	6.51MB	

#### Table 2-5 Backup file information

Parameter	Description	
Database Type	Select Microsoft SQL Server.	
Backup File Source	Select <b>RDS full backup</b> . <b>NOTE</b> Select a backup file whose status is <b>Completed</b> .	
Enterprise Project	An enterprise project you would like to use to centrally manage your cloud resources and members. Select an enterprise project from the drop-down list. The default project is <b>default</b> .	
	For more information about enterprise projects, see <i>Enterprise</i> <i>Management User Guide</i> .	
	To customize an enterprise project, click <b>Enterprise</b> in the upper right corner of the console. The <b>Enterprise Project</b> <b>Management Service</b> page is displayed. For details, see <b>Creating an Enterprise Project</b> in <i>Enterprise Management User</i> <i>Guide</i> .	

Parameter	Description
Tags	• Tags a task. This configuration is optional. Adding tags helps you better identify and manage your tasks. Each task can have up to 20 tags.
	• If your organization has configured tag policies for DRS, add tags to tasks based on the policies. If a tag does not comply with the policies, task creation may fail. Contact your organization administrator to learn more about tag policies.
	<ul> <li>After a task is created, you can view its tag details on the Tags tab. For details, see Tag Management.</li> </ul>

#### **Step 3** On the **Select Destination** page, specify database information and click **Next**.

Database Information		
Destination RDS DB Instance Name		Select Destination RDS DB Instance
	I understand restoring databases to the destinate databases, and the databases in the destination d understand that only an existing instance that has greater than or equal to that of the source instance	Instance will everywhe the instance data or create new abbase are unavailable during the restmitten. I also the same or a later version, and whose stanage space is can be selected.
Backup Database Name	<ul> <li>Backup Database Name</li> </ul>	New Database Norne
	00_100112	0,1602
	🕑 @_1082V6_81	db_1002V6_01
	db_g2x_ful_incr_t0_datamodel_001	db_g2x_hil_incr_i0_datamodel_f
	00_510_51nc_Inct_002	db_sH_sync_Incr_edt_002
	00_535_5ync_linor_red8_001	db_std_symc_linor_redit_001
	db_g2t_incr_30_dstamodel_001	da_g2x_incr_30_datamodel_001
	db_g2z_ful_amodel_001	da_g2x_hul_amodel_001
	00_925_Ind_0_648amodel_001	db_g25_incr_0_dalamodel_001
	Test_Database	Test_Database

#### Figure 2-3 Database information

#### Table 2-6 Database information

Parameter	Description		
Destination RDS DB Instance Name	Select a destination RDS DB instance.		
Backup Database Name	After you select the destination RDS DB instance, all databases to be restored are automatically displayed. You can select databases to be restored as required and rename them.		
	• <b>Backup Database Name</b> : Name of the database to be restored.		
	• New Database Name: The backup database name must consist of 1 to 64 characters. It can contain only uppercase letters, lowercase letters, digits, hyphens (-), underscores (_), and periods (.). If the name is not specified, the original database name is used.		
	NOTE		
	<ul> <li>The backup database can be renamed. A maximum of 100 backup databases can be created.</li> </ul>		
	<ul> <li>The new database name cannot be the same as the name of any other database in the source.</li> </ul>		

**Step 4** On the **Confirm Task** page, check configuration details, read and agree to the agreement, and click **Next**.

#### **NOTE**

If the SQL Server source contains non-clustered index tables, the index information of nonclustered index tables will become invalid after the SQL Server backups are restored to a new database. For the best performance, rebuild the indexes after the backup migration. In addition, the backup files store only database-level information. If the SQL Server source contains some instance-level configurations, such as login, permission, DBlink, and job, migrate these configurations by referring to **Best Practices**.

**Step 5** In the task list on the **Backup Migration Management** page, check whether the task is in the **Restoring** status. If the migration is successful, the task status becomes **Successful**.

----End

## **3** Creating a Backup Using OBS Buckets

#### **Supported Source and Destination Databases**

Table 3-1 Supported databa	ases
----------------------------	------

Source DB	Destination DB	
On-premises and other cloud's Microsoft SQL Server backup file versions:	RDS for SQL Server Microsoft SQL Server 2008	
<ul> <li>Microsoft SQL Server 2000 Enterprise Edition and Standard Edition</li> </ul>	<ul> <li>Microsoft SQL Server 2012 Enterprise Edition, Standard Edition,</li> </ul>	
• Microsoft SQL Server 2005 Enterprise Edition and Standard Edition	<ul> <li>Microsoft SQL Server 2014 Enterprise Edition, Standard Edition,</li> </ul>	
Microsoft SQL Server 2008     Enterprise Edition, Standard     Edition, and Web Edition	<ul> <li>and Web Edition</li> <li>Microsoft SQL Server 2016 Enterprise Edition, Standard Edition,</li> </ul>	
Microsoft SQL Server 2012 Enterprise Edition, Standard Edition, and Web Edition	<ul> <li>and Web Edition</li> <li>Microsoft SQL Server 2017 Enterprise Edition, Standard Edition, and Web Edition</li> </ul>	
Introsoft SQL Server 2014     Enterprise Edition, Standard     Edition, and Web Edition	<ul> <li>Microsoft SQL Server 2019 Enterprise Edition, Standard Edition,</li> </ul>	
<ul> <li>Microsoft SQL Server 2016</li> <li>Enterprise Edition, Standard</li> <li>Edition, and Web Edition</li> <li>Microsoft SQL Server 2017</li> </ul>	<ul> <li>And Web Edition</li> <li>NOTE</li> <li>The major version of the destination database must be the same as or later</li> </ul>	
<ul> <li>Microsoft SQL Server 2017</li> <li>Enterprise Edition, Standard Edition, and Web Edition</li> <li>Microsoft SQL Server 2019 Enterprise Edition, Standard Edition and Web Edition</li> </ul>	<ul> <li>than that of the source database.</li> <li>The edition of the destination database must be the same as or later than that of the source database, for example, from Web Edition to Standard Edition,</li> </ul>	
	Edition, or from Enterprise Edition to Enterprise Edition, or from Enterprise Edition to Enterprise Edition.	

#### Prerequisites

- You have logged in to the DRS console.
- Your account balance is greater than or equal to \$0 USD.
- For details about the supported DB types and versions, see **Supported Databases**.
- If a subaccount is used to create a DRS task, ensure that an agency has been added. For details about how to create an agency, see Agency Management.

#### Before Backing Up File

Learn the backup migration constraints before starting a migration task.

Scenario	Preparations	
OBS bucket	• An OBS bucket is available. If there is no OBS bucket, create one. For detailed operations, see "Creating a Bucket" in the <i>Object Storage Service Console Operation Guide</i> .	
	• Database backup files have been uploaded to the OBS bucket. If there are no backup files in the OBS bucket, upload local backup files to it and ensure that the backup file name format is correct. For details about how to upload backup files, see "Uploading a File" in <i>Object Storage Service Console Operation Guide</i> .	
	<ul> <li>If you want to upload multiple files in batches (up to 100 files can be uploaded at a time and the total size of the files cannot exceed 5 GB) or upload files greater than 5 GB at a time, download the OBS Browser+ client and install and log in to it. For details, see Object Storage Service Tools Guide.</li> </ul>	
	NOTE	
	<ul> <li>Currently, KMS encryption is not available when you upload backup files to an OBS bucket.</li> </ul>	
	<ul> <li>When you upload backup files to an OBS bucket, select Standard for Storage Class. Otherwise, the migration will fail.</li> </ul>	
	<ul> <li>If the number of data records in a bucket exceeds 500, data overflow may occur. As a result, some data cannot be displayed. You can use an independent standard bucket with the public-read permission.</li> </ul>	
	• You are advised to store backup files in independent OBS buckets in the same region as the destination DB instance.	

Table 3-2 Before Backing Up File

#### Precautions

This section describes constraints on backup migrations of Microsoft SQL Server databases.

Туре	Restrictions		
Database permissions	Before creating a backup migration task, ensure that the current account has the OBS and bucket permissions.		
	For details about OBS permissions, see <b>OBS Permissions</b> Management.		
Backup database names	<ul> <li>Backup database names are case-insensitive, must be unique, and cannot be any of the following: <ul> <li>msdb</li> <li>master</li> <li>model</li> <li>tempdb</li> <li>rdsadmin</li> <li>resource</li> </ul> </li> <li>The name of the OBS bucket contains 1 to 256 characters, including letters, digits, underscores (_), and hyphens (-).</li> </ul>		
New database name	<ul> <li>The new database name must be unique and cannot be any of the following (case-insensitive): <ul> <li>msdb</li> <li>master</li> <li>model</li> <li>tempdb</li> <li>rdsadmin</li> <li>resource</li> </ul> </li> <li>The new database name contains 1 to 64 characters, including letters, digits, underscores (_), hyphens (-), and periods (.).</li> </ul>		
Local backup files	<ul> <li>The suffix of the backup file to be uploaded to an OBS bucket must be .bak. Only .bak files can be selected in the OBS backup file list.</li> <li>The backup file name contains 1 to 100 characters.</li> <li>The backup file name consists of uppercase letters, lowercase letters, digits, underscores (_), plus signs (+), and periods (.).</li> <li>Backup files are classified into full backup files and log backup files.</li> </ul>		
Backup file sources	OBS buckets: store local backup files in its root directory.		

Туре	Restrictions		
Precautions	<ul> <li>The OBS bucket and DB instance must be in the same region.</li> <li>The available disk space of the destination database is at least 1.5 times the total data size of the backup database.</li> </ul>		
	• Backup database name is case-sensitive and must be the same as the database name in the backup file.		
	• Backup migration is not supported for a source database with TDE enabled.		
	• The database backup file from a database of later version cannot be restored on the instance database of an earlier version (for example, restored from version 2017 to 2016).		
	• The restoration from Enterprise Edition to Standard Edition to Web Edition may fail. That depends on whether the features of the later version are enabled.		
	• During a migration, if <b>Overwrite Data</b> is set to <b>Yes</b> , high availability of the destination database is disabled by default. After the migration is complete, high availability is restored automatically.		
	<ul> <li>During a migration, stop writing transactions to the destination database.</li> </ul>		
	• If a primary/standby switchover of the destination database is performed, the backup migration fails. In this case, the migration task cannot be restored.		

#### Procedure

This section describes how to create a backup migration task using the backup stored in the OBS bucket on the DRS console.

- **Step 1** On the **Backup Migration Management** page, click **Create Migration Task**.
- **Step 2** On the **Select Backup** page, specify information about the task and backup files. Then, click **Next**.

#### Figure 3-1 Task information

Region	🗸	
	Regions are geographic areas isolated from each other.	For low network latency and quick resource access, select the nearest region.
Project	V	
* Task Name	DRS-6516	0
Description		0
	0/25	5

Table 3-4 Task	information
----------------	-------------

Parameter	Description
Region	The region where your service is running. You can change the region. To reduce latency and improve access speed, select the region closest to your services.
Project	The project corresponds to the current region and can be changed.
Task Name	The task name must start with a letter and consist of 4 to 50 characters. It can contain only letters, digits, hyphens (-), and underscores (_).
Description	The description can contain up to 256 characters and cannot contain special characters !=<>&'\"

#### Figure 3-2 Backup file information

Backup File Ir	formation			
Database Type	Microsoft SQL Server			
Backup File Source	OSS Bucket 805 full backup ①			
Bucket Name	Contraction of the second seco			
* Enterprise Project	-select- V C Wav Project Management 💿			
Tegs	It is recommended that you use TMSS production to add the same lag to different cloud resources. View productived tags: C To add a lag, entire tags lays and a lags value below.			
	Enter a tag key Enter a tag value Add			
	You can and 20 tags more tags.		Enter a backup name. Q C	
Backup Name		Size	Last Modified Time	
+ 🗌 name		-	May 25, 2024 10:01:59 GMT+08:00	
+ offine-obs-at		-	Mar 31, 2023 10:36:50 GMT+08:00	

#### Table 3-5 Backup file information

Parameter	Description		
Database Type	Database type of the backup file. Select Microsoft SQL Server.		
Backup File Source	Select <b>OBS Bucket</b> .		
Bucket Name	Select a bucket and a backup file stored in the directory of the bucket. <b>NOTE</b>		
	<ul> <li>The backup file of the Microsoft SQL Server must be named in the .bak format in the OBS bucket directory. Multiple backup files can be selected at the same time.</li> </ul>		
	• A database cannot be split into different files for upload.		
	<ul> <li>The bucket name, backup file name, or path cannot contain Chinese characters or spaces.</li> </ul>		

Next

Parameter	Description		
Enterprise Project	An enterprise project you would like to use to centrally manage your cloud resources and members. Select an enterprise project from the drop-down list. The default project is <b>default</b> .		
	For more information about enterprise projects, see <i>Enterprise Management User Guide</i> .		
	To customize an enterprise project, click <b>Enterprise</b> in the upper right corner of the console. The <b>Enterprise Project Management Service</b> page is displayed. For details, see <b>Creating an Enterprise Project</b> in <i>Enterprise Management User Guide</i> .		
Tags	<ul> <li>Tags a task. This configuration is optional. Adding tags helps you better identify and manage your tasks. Each task can have up to 20 tags.</li> </ul>		
	• If your organization has configured tag policies for DRS, add tags to tasks based on the policies. If a tag does not comply with the policies, task creation may fail. Contact your organization administrator to learn more about tag policies.		
	• After a task is created, you can view its tag details on the <b>Tags</b> tab. For details, see <b>Tag Management</b> .		

#### **Step 3** On the **Select Destination** page, specify database information and click **Next**.



#### Figure 3-3 Microsoft SQL Server database information

Parameter	Description
Destination RDS DB Instance Name	Select a destination RDS DB instance.
Backup File	Select <b>Full</b> or <b>Incremental</b> .
Format	• Full: indicates full backup files.
	Incremental: indicates log backup files.
	NOTE
	<ul> <li>Before performing an incremental restoration, you need to perform a full restoration.</li> </ul>
	<ul> <li>To migrate databases at a time, you need to stop services first and upload full backups for restoration.</li> </ul>
	<ul> <li>To ensure service continuity during a migration, perform a full backup and multiple incremental backups, and then upload the backup data to OBS for restoration.</li> </ul>
Last Backup	A complete restoration involves restoring several incremental backup files. The destination DB instance cannot be modified while it is being restored. It will not be available until the last backup file is restored. If you select Yes and restore the instance, any incremental restoration will not be performed. You can select the last backup in the following scenarios:
	Perform a one-time full migration.
	• The selected backup file is the last one to be restored.
	• Select <b>No</b> for the full+incremental backup migration scenario where you continue to restore databases using incremental backup files after a full backup restoration is performed. During this period, the destination DB instance is being restored and in the unavailable state.
Overwrite Data	You can determine whether to overwrite data in the destination database during the restoration if the destination DB instance contains a database with the same name as the backup database. Exercise caution when performing this operation. <b>NOTE</b> If you select this option, the destination databases with the same names as the backup databases will be overwritten. Exercise caution

Table 3-6 Microsoft SQL S	erver database information
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Parameter	Description		
Perform Pre- verification	Specifies whether to perform pre-verification on the backup migration task. The default value is <b>Yes</b> .		
	• Yes: To ensure successful migration and identify potentia problems in advance, verify the validity, integrity, continuity, and version compatibility of backup files before restoration.		
	• No: If pre-verification is not performed, the migration speed is faster, but you need to check the validity, integrity, continuity, and version compatibility of backup files on your own.		
Restore Database	You can restore all or part of databases. All of databases are restored by default.		
	• All: Restore all databases from the backup file. You do not need to enter the name of the database to be restored.		
	• <b>Custom</b> : Restore specified databases from the backup file. You need to enter the names of the databases to be restored. The databases to be restored must be consistent with those for which the full or incremental backups are created.		
Reset Database Name	If <b>Restore Database</b> is set to <b>All</b> , you can reset database names. If you enable <b>Reset Database Name</b> , the original database names in the backup file will be reset to new database names.		
	Constraint:		
	• The backup file contains only one database.		
	• The backup file is a full backup file and is the last backup file. Select <b>Full</b> for <b>Backup File</b> and <b>Yes</b> for <b>Last Backup Type</b> .		
	NOTE The database name can be reset only when <b>Backup Type</b> is set to <b>Full</b> and <b>Restore Database</b> is set to <b>All</b> .		

Parameter	Description		
Backup Database Name	If <b>Restore Database</b> is set to <b>Custom</b> , you need to specify <b>Backup Database Name</b> .		
	The backup database name must be the same as that in the backup file and consist of 1 to 64 characters. It can contain only letters (case-sensitive), digits, hyphens (-), underscores (_), and periods (.).		
	DRS also allows you to create an alias for the database to be restored.		
	• If you choose to restore databases in full backup mode, you can set the alias of the database based on the site requirements. The alias is also stored in the destination database.		
	<ul> <li>If databases are restored in incremental backup mode, alias is not supported.</li> </ul>		
	<b>NOTE</b> The backup database can be renamed. Up to 100 backup databases can be created.		

**Step 4** On the **Confirm Task** page, check configuration details, read and agree to the agreement, and click **Next**.

**NOTE** 

If the SQL Server source contains non-clustered index tables, the index information of nonclustered index tables will become invalid after the SQL Server backups are restored to a new database. For the best performance, rebuild the indexes after the backup migration. In addition, the backup files store only database-level information. If the SQL Server source contains some instance-level configurations, such as login, permission, DBlink, and job, migrate these configurations by referring to **Best Practices**.

**Step 5** In the task list on the **Backup Migration Management** page, check whether the task is in the **Restoring** status. If the migration is successful, the task status becomes **Successful**.

----End

## **4** Task Management

#### 4.1 Viewing Task Details

The **Basic Information** page of a backup migration task displays information about the task, backup files, and databases. This section describes how to view details about current migration task.

#### Prerequisites

You have logged in to the DRS console.

#### Procedure

#### **NOTE**

In the task list, only tasks created by the current login user are displayed. Tasks created by different users of the same tenant are not displayed.

- **Step 1** On the **Backup Migration Management** page, click the target migration task name in the **Task Name/ID** column.
- Step 2 On the displayed Basic Information tab, view details about the migration task.

You can view information about the task, backup files, and databases.

----End

#### 4.2 Modifying Task Information

After a backup migration task is created, you can modify basic information about the task to identify different tasks.

The following task information can be edited:

- Task name
- Description

#### Prerequisites

You have logged in to the DRS console.

#### Procedure

- **Step 1** On the **Backup Migration Management** page, click the target migration task name in the **Task Name/ID** column.
- **Step 2** On the **Basic Information** page, click  $\checkmark$  next to the information to modify.
  - To submit the change, click 🗹.
  - To cancel the change, click X.

Table 4-1	Task	information	description
-----------	------	-------------	-------------

Task Information	Description
Task name	The task name must start with a letter and consist of 4 to 50 characters. It can contain only letters, digits, hyphens (-), and underscores (_).
Description	The description consists of a maximum of 256 characters and cannot contain the following special characters: ! =<>'&"

**Step 3** View the change result on the **Basic Information** tab.

----End

#### 4.3 Viewing Migration Logs

Migration logs refer to the warning-, error-, and info-level logs generated during the migration process. This section describes how to view migration logs to locate and analyze database problems, if any.

#### Prerequisites

You have logged in to the DRS console.

#### Procedure

- **Step 1** On the **Backup Migration Management** page, click the target migration task name in the **Task Name/ID** column.
- **Step 2** On the displayed page, click **Migration Logs** to view the logs generated during the migration.

#### Figure 4-1 Viewing migration logs

1	Basic Information	Report Logs to LTS			Q. Add search criteria.	0
1	Terr	Time	Level	Description		
1090	1040	Mar 22, 2024 09:51:56 OMT+08:00	info	The backup migration task successfull		
		Mar 22, 2024 09:51:55 GMT+08:00	into	The backup migration task executes successfully, task is finished		
		Mar 22, 2024 09:51:55 GMT+08:00	into	The backup migration task is running restore workflow-id: 0b6c0b09-0511-4378-ac63-a2c1a3bc4c91		
		Mar 22, 2024 09:43:10 GMT+08:00	into	The backup migration task is running restore workflow kit: 0b6c0009.65164378 ac63 a2c1a3bc4c01		
		Mar 22, 2024 09:42:55 GMT+08:00	info	The backup migration task is running restore workflow id: 0b6c0609-6511-4378-ac63-a2c1a3bc4c01		
		Mar 22, 2024 09:42:55 GMT+08:00	info	Submit backup migration task successfully.		

You can view time, levels, and descriptions of the logs.

In addition, DRS can interconnect with Log Tank Service (LTS). After you enable log reporting to LTS, all logs generated by DRS instances will be uploaded to LTS for management. For details, see **Log Reporting**.

----End

#### 4.4 Deleting a Migration Task

This section describes how to delete a migration task. Deleted tasks will no longer be displayed in the task list. Exercise caution when performing this operation.

#### Prerequisites

You have logged in to the DRS console.

#### **Deleting a Task**

- **Step 1** In the task list on the **Backup Migration Management** page, locate the target task and click **Delete** in the **Operation** column.
- Step 2 Click Yes to submit the deletion task.

----End

#### **Deleting Tasks**

- Step 1 On the Backup Migration Management page, select the task to be deleted.
- Step 2 Click Batch Operations in the upper left corner and choose Delete.

Batch O	perations   Export									
Delete	rch criteria.								С	۲
	Task Name/ID \ominus	Status 😔	DB Engine \ominus	Created 😔	Completed \ominus	Description 😝	Enterp \ominus	Operation		
		<ul> <li>Successful</li> </ul>	Microsoft SQL	Jun 04, 2024 00:25:	Jun 04, 2024 00:27:14 GMT	Auto_OfflineMigrati	default	Delete		
		Successful	Microsoft SQL	May 30, 2024 09:25	May 30, 2024 09:29:55 GMT		default	Delete		

**Step 3** In the displayed dialog box, confirm the task information and click **Yes**.

----End

#### 4.5 Task Statuses

Migration statuses indicate different migration phases.

Table 4-2 lists statuses and descriptions of backup migration tasks.

Status	Description
Restoring	A backup file is being restored to the destination database.
Successful	A backup file has been restored to the destination database.
Failed	A backup file fails to be restored to the destination database.
Check failed	A backup file is unavailable.

#### Table 4-2 Backup migration task statuses

#### 

Deleted migration tasks are not displayed in the status list.

### **5** Interconnecting with LTS

#### 5.1 Log Reporting

#### Scenarios

If you enable log reporting, all logs generated by DRS instances (including realtime migration, backup migration, real-time synchronization, real-time disaster recovery, and workload replay instances) are uploaded to Log Tank Service (LTS) for management.

#### Precautions

- After this function is enabled, all logs of the task are reported by default.
- This request does not take effect immediately. There is a delay of about 10 minutes.
- You will be billed for this function. For details, see LTS Pricing Details.
- Ensure that there are available LTS log groups and log streams in the same region as your instance.

For more information about log groups and log streams, see **Log Management**.

• After this function is disabled, you will not be billed anymore.

#### Enabling or Disabling Log Reporting

**Step 1** Log in to the management console.

- **Step 2** Click <sup>(Q)</sup> in the upper left corner and select a region and project.
- **Step 3** Choose **Database > Data Replication Service**. The **Data Replication Service** page is displayed.
- **Step 4** Take real-time migration as an example. On the **Online Migration Management** page, click the target migration task name in the **Task Name/ID** column. The operations for real-time synchronization, real-time disaster recovery, and workload replay are similar to those for real-time migration.

**Step 5** On the **Basic Information** page, click **Migration Logs** on the left.

**Step 6** Click **OPP** next to **Report Logs to LTS** in the upper part of the page.

Step 7 Select an LTS log group and log stream and click OK.

D NOTE

This request does not take effect immediately. There is a delay of about 10 minutes.

Figure 5-1 Enabling audit log reporting to LTS

Report Logs to LTS			^
Logs record all requests sent to you This request is not applied immediat You will be billed for log reporting. Fi After this function is enabled, all logs After this function is disabled, you will after this function is disabled, you will	DB instance and are stored in Log Tank Service (LTS). ey, There is a delay of about 10 minutes. or details, see LTS pricing details. of the task are reported by default. III not be billed anymore.	×	
Log Group	~	C View Log Groups	
Log Stream	~		
		Cancel OK	

- **Step 8** To disable or modify log reporting, click the toggle switch next to **Report Logs to LTS** or click **Edit** next to the **Report Logs to LTS** toggle switch.
  - Modifying log reporting: Click **Edit** next to the **Report Logs to LTS** toggle switch. In the displayed dialog box, select the LTS log group and log stream again and click **OK**.
  - Disabling log reporting: Click the toggle switch next to **Report Logs to LTS**. In the displayed dialog box, click **OK**.

Figure 5-2 Disabling log reporting to LTS

🛕 Report Logs to LTS	×
Disable Log Reporting to LTS? If log reporting is disabled, logs generated for the DB instance will not be reporte to Log Tank Service (LTS). This request is not applied immediately. There is a delay of about 10 minutes.	d
Cancel OK	

----End

#### 5.2 Viewing and Downloading Logs

#### Scenarios

If you have enabled log reporting to LTS for a DRS task in **Log Reporting**, you can analyze logs, search for logs, visualize logs, download logs, and view real-time logs on the LTS console.

#### **Viewing Logs Reported to LTS**

**Step 1** Log in to the management console.

- **Step 2** Click <sup>(Q)</sup> in the upper left corner and select a region and project.
- Step 3 Under Management & Governance, click Log Tank Service.
- **Step 4** In the **Log Groups** area, locate a target log group and click its name. For details about LTS, see *Log Tank Service (LTS) User Guide*.

#### Figure 5-3 Viewing log details



#### Table 5-1 Log field description

Name	Туре	Description
_resource_id	String	Resource ID. The value is fixed to <b>projectId</b> for DRS.
_resource_name	String	Resource name. The value is fixed to <b>DRS</b> .
_service_type	String	Service type. The value is fixed to <b>Data Replication Service</b> .

----End

#### **Downloading Logs Reported to LTS**

- **Step 1** Log in to the management console.
- **Step 2** Click <sup>1</sup> in the upper left corner and select a region and project.
- Step 3 Under Management & Governance, click Log Tank Service.
- **Step 4** In the **Log Groups** area, locate a target log group and click its name.
- **Step 5** Click **Download** on the right to download logs. For details about LTS, see *Log Tank Service (LTS) User Guide*.



#### Figure 5-4 Downloading logs



## **6** Tag Management

#### Scenarios

Tag Management Service (TMS) enables you to use tags on the management console to manage resources. TMS works with other cloud services to manage tags. TMS manages tags globally, and other cloud services manage their own tags. If you have to manage a large number of tasks, you can use different tags to identify and search for tasks.

- You are advised to set predefined tags on the TMS console.
- A tag consists of a key and value. You can add only one value for each key.
- Each DB instance can have up to 20 tags.

#### Adding a Tag

- **Step 1** On the **Backup Migration Management** page, click the target migration task name in the **Task Name/ID** column.
- **Step 2** In the navigation pane on the left, choose **Tags**.
- **Step 3** On the **Tags** page, click **Edit Tag**. In the displayed dialog box, click **Add Tag**, enter a tag key and value, and click **OK**.

	Edit Tag	
You can edit this task.	TMS's predefined tags are recommended for adding the same tag to different cloud resources. Create predefined tags $[?]$	
You can add 20 more tags. A tag is a pair of key and v values blank.	+ Add Tag You can add 20 more tags.	
<ul> <li>Q. Select a property or enter a keyword.</li> <li>Key ♦</li> </ul>		

• When you enter a tag key and value, the system automatically displays all tags (including predefined tags and resource tags) associated with all DB instances except the current one.

- The tag key cannot be empty and must be unique. It cannot start or end with a space or start with **\_sys\_**. It can contain 1 to 128 characters, including letters, digits, spaces, and special characters \_.:=+-@
- The tag value can be empty. It cannot start or end with a space and can contain 0 to 255 characters, including letters, digits, spaces, and special characters \_.:=+-@
- **Step 4** View and manage the tag on the **Tags** page.

----End

#### Editing a Tag

- **Step 1** On the **Backup Migration Management** page, click the target migration task name in the **Task Name/ID** column.
- **Step 2** In the navigation pane on the left, choose **Tags**.
- **Step 3** On the **Tags** page, click **Add/Edit Tags**. In the displayed dialog box, modify the tag and click **OK**.

----End

#### Delete a Tag

- **Step 1** On the **Backup Migration Management** page, click the target migration task name in the **Task Name/ID** column.
- **Step 2** In the navigation pane on the left, choose **Tags**.
- **Step 3** On the **Tags** page, locate the tag to be deleted and click **Delete** in the **Operation** column. In the displayed dialog box, click **Yes**.
- **Step 4** After the tag is deleted, it will no longer be displayed on the **Tags** page.

----End