Huawei Cloud Flexus RDS

Best Practices

Issue	01
Date	2025-05-14

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Contents

1 Migrating MySQL Databases from Other Clouds to FlexusRDS for MySQL

1.1 Overview

Scenarios

This best practice includes the following tasks:

- Create a FlexusRDS for MySQL instance.
- Migrate data from a MySQL database on other clouds to FlexusRDS for MySQL.

Prerequisites

- You have registered with Huawei Cloud.
- Your account balance is greater than or equal to $0 USD.

Service List

- Virtual Private Cloud (VPC)
- Huawei Cloud Flexus RDS (FlexusRDS)
- Data Replication Service (DRS)

Before You Start

- The resource planning in this best practice is for demonstration only. Adjust it as needed.
- The end-to-end test data in this practice is for reference only. For more information about MySQL data migration, see **From MySQL to MySQL**.

1.2 Resource Planning

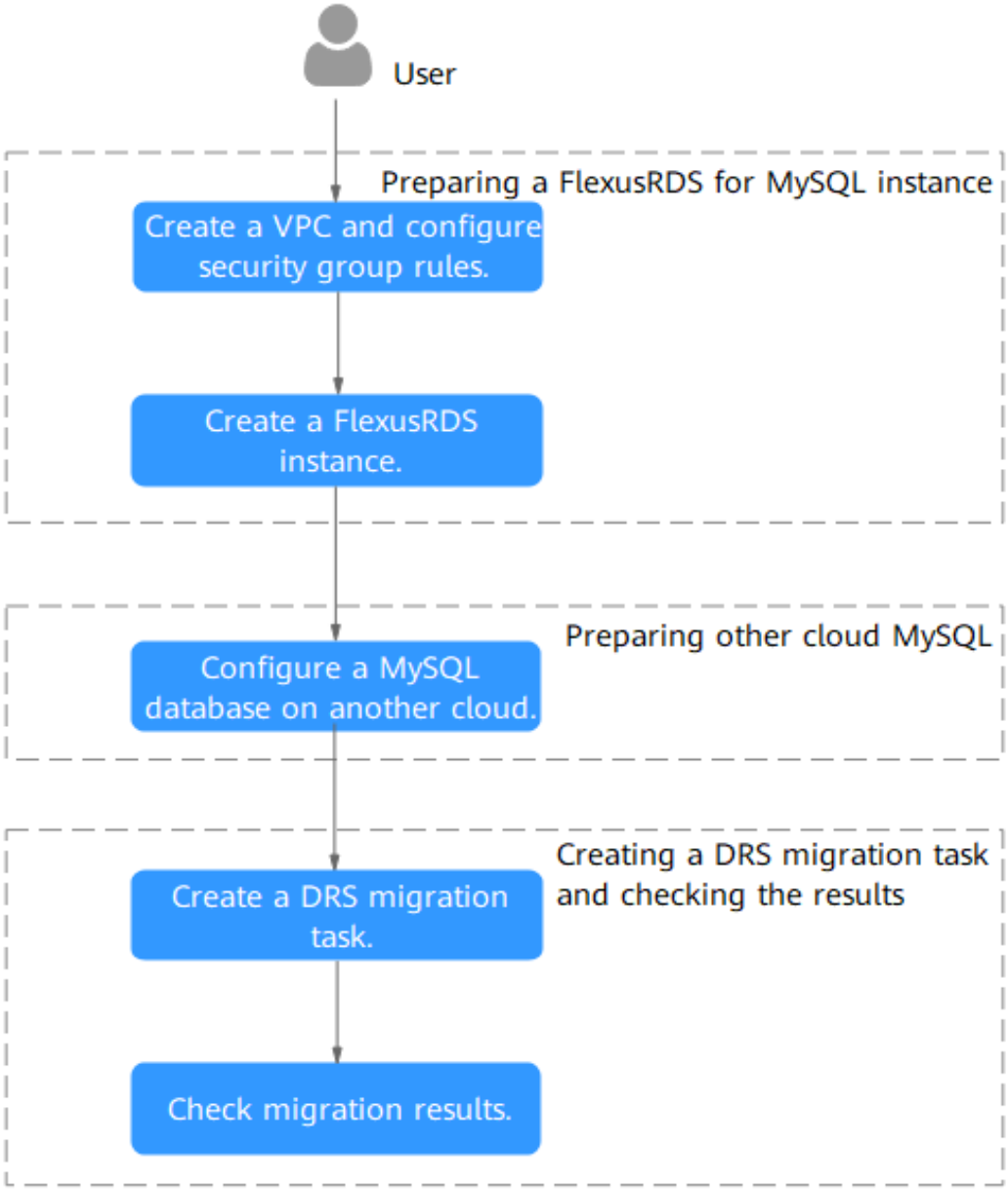
Table 1-1 Resource planning

Category	Subcategory	Planned Value	Description
VPC	VPC name	vpc-mysql	Specify a name that is easy to identify.
	Region	CN-Hong Kong	To achieve lower network latency, select the region nearest to you.
	AZ	AZ 2	-
	Subnet	192.168.0.0/16	Select a subnet with sufficient network resources.
	Subnet name	subnet-mysql	Specify a name that is easy to identify.
MySQL on another cloud	DB engine version	MySQL 8.0	-
	IP address	10.154.217.42	Enter an IP address.
	Port	3306	-
FlexusRDS for MySQL	Instance name	flexusrds-mysql	Specify a name that is easy to identify.
	DB engine version	MySQL 8.0	-
	Instance type	Single	A single-node instance is used in this example. To improve service reliability, select a primary/standby instance.
	Storage type	Cloud SSD	-
	Region	CN-Hong Kong	To achieve lower network latency, select the region nearest to you.
	Instance class	Standard 2 vCPUs | 4 GB	-
DRS migration task	Task name	DRS-Task	Specify a name that is easy to identify.
	Source DB engine	MySQL	-

Category	Subcategory	Planned Value	Description
	Destination DB engine	MySQL	-
	Network type	Public network	Public network is used in this example.

1.3 Operation Process

Figure 1-1 Flowchart



1.4 Creating a VPC and Configuring Security Group Rules

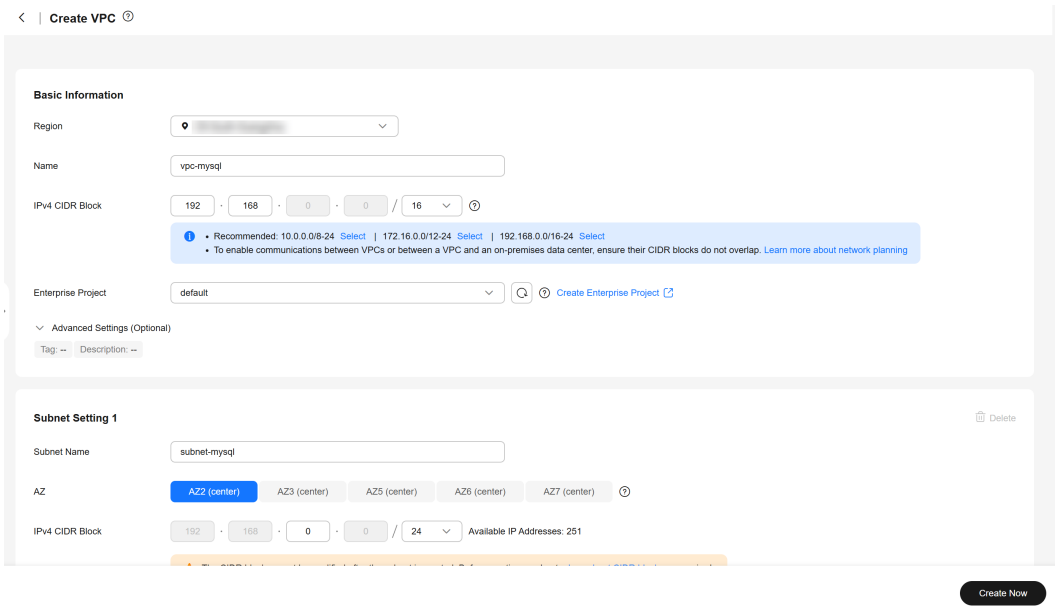
Create a VPC to prepare network resources for creating a FlexusRDS for MySQL instance, and add an inbound rule for the default security group of the FlexusRDS for MySQL instance.

Creating a VPC

Step 1 Go to the **Create VPC** page.

Step 2 Configure the basic information, subnet, and IP address.

Figure 1-2 Creating a VPC



Step 3 Click **Create Now**.

Step 4 Return to the VPC list and check whether the VPC is created.

If the VPC status becomes available, the VPC has been created.

----End

Configuring Security Group Rules

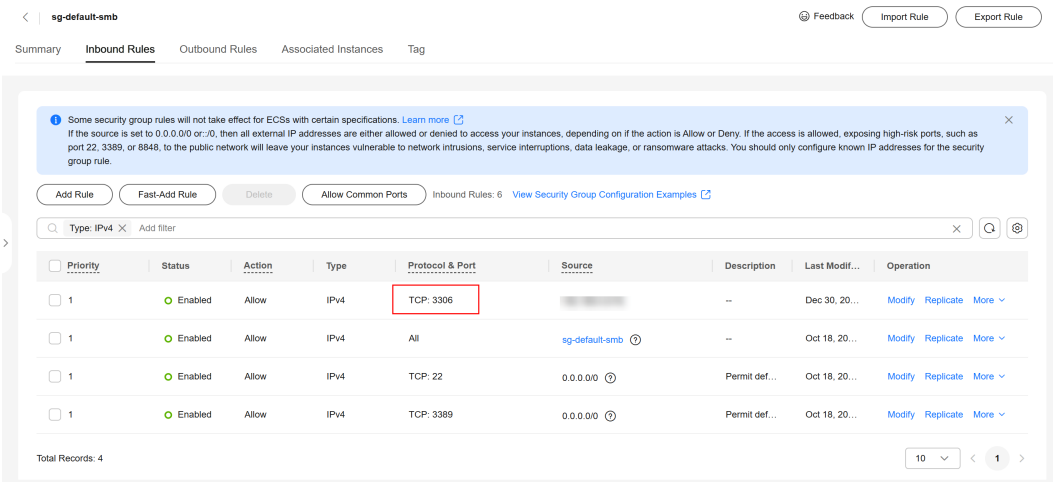
Step 1 Go to the **Security Groups** page.

Step 2 Click the security group name **sg-default-smb**.

Step 3 Click the **Inbound Rules** tab, and then click **Add Rule**.

Step 4 Configure an inbound rule to allow access from database port **3306**.

Figure 1-3 Inbound rules



----End

1.5 Creating a FlexusRDS for MySQL Instance

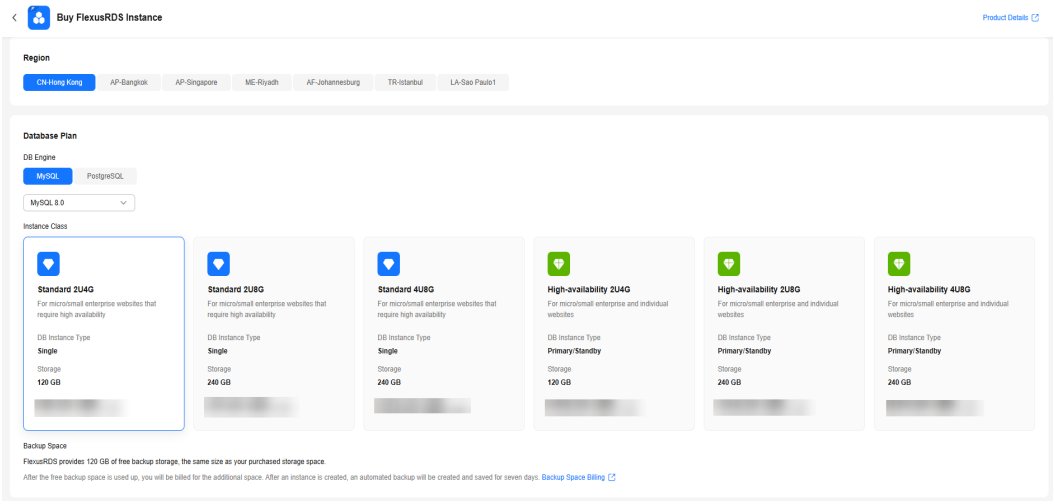
Create a FlexusRDS for MySQL instance.

Step 1 Go to the **FlexusRDS console**.

Step 2 If this is your first time to create an instance on this console, click **Buy**.

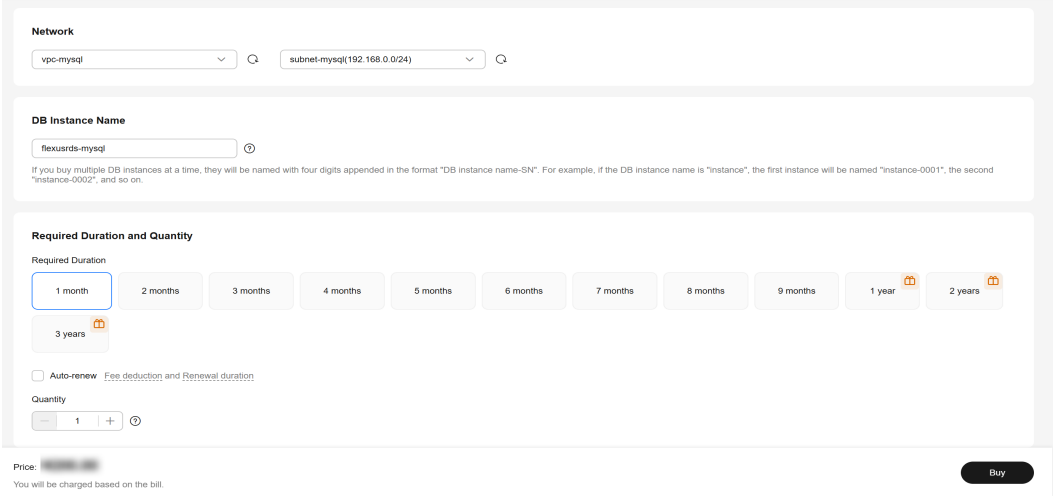
Step 3 Configure basic information for the instance. Select **CN-Hong Kong** for **Region**.

Figure 1-4 Selecting an instance class



Step 4 Configure the instance network information.

Figure 1-5 Instance class



Select the VPC created in **Creating a VPC and Configuring Security Group Rules**.

Step 5 Click **Buy**.

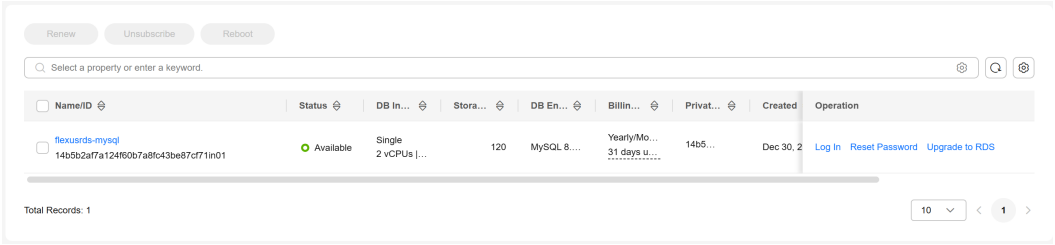
Step 6 Confirm the order and click **Pay Now**.

Step 7 Select a payment method and complete the payment.

Step 8 View the purchased instance.

- Administrator account: **root**
- Password of the administrator account: The password is randomly set by the system. You need to reset the password when using the account.
- Default security group: **sg-default-smb**
- Default port number: **3306**

Figure 1-6 Instance successfully purchased



----End

1.6 Configuring a MySQL Instance on Another Cloud

Prerequisites

- You have purchased a MySQL instance from another cloud vendor platform.
- Your account has the migration permissions listed in **Permission Requirements**.

Permission Requirements

Table 1-2 lists the permissions required for migrating data from a MySQL instance on another cloud to FlexusRDS for MySQL using Data Replication Service (DRS). For details about the permissions, see **Which MySQL Permissions Are Required for DRS?**

Table 1-2 Migration permissions

Database	Full Migration Permission	Full+Incremental Migration Permission
Source database (MySQL)	SELECT, SHOW VIEW, and EVENT	SELECT, SHOW VIEW, EVENT, LOCK TABLES, REPLICATION SLAVE, and REPLICATION CLIENT

Network Configuration

You need to enable public accessibility for the source database.

Whitelist Settings

The EIP of the DRS replication instance must be on the whitelist of the source database for the connectivity between the DRS replication instance and the source database. To obtain the EIP of the DRS replication instance, see **Step 3** in **Creating a DRS Migration Task**. The method of configuring a whitelist varies depending on the cloud database vendors. For details, see their official documentation.

1.7 Cloud Migration

1.7.1 Creating a DRS Migration Task

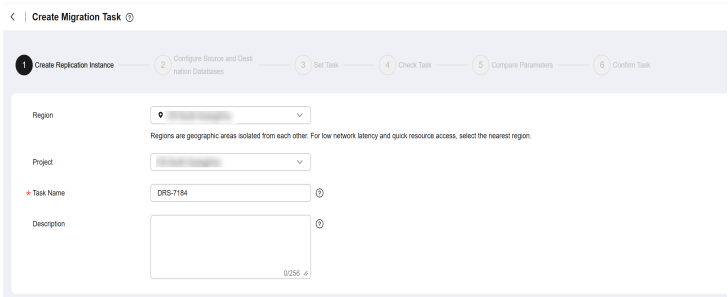
Creating a Migration Task

Step 1 Go to the **Create Migration Task** page.

Step 2 Configure parameters as needed.

1. Enter the migration task name. Select the region hosting the destination DB instance for **Region**.

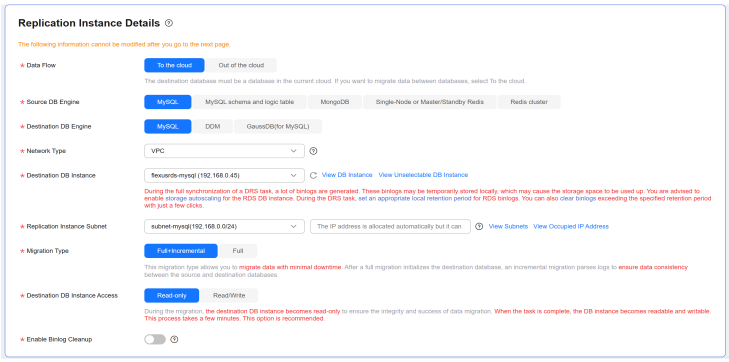
Figure 1-7 Migration task



2. Configure the replication instance information.

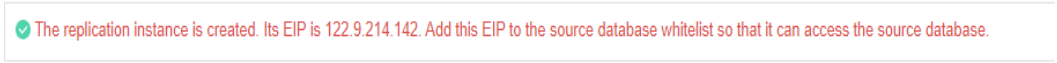
   Select the DB instance created in **Creating a FlexusRDS for MySQL Instance** as the destination database.

   Figure 1-8 Replication instance details



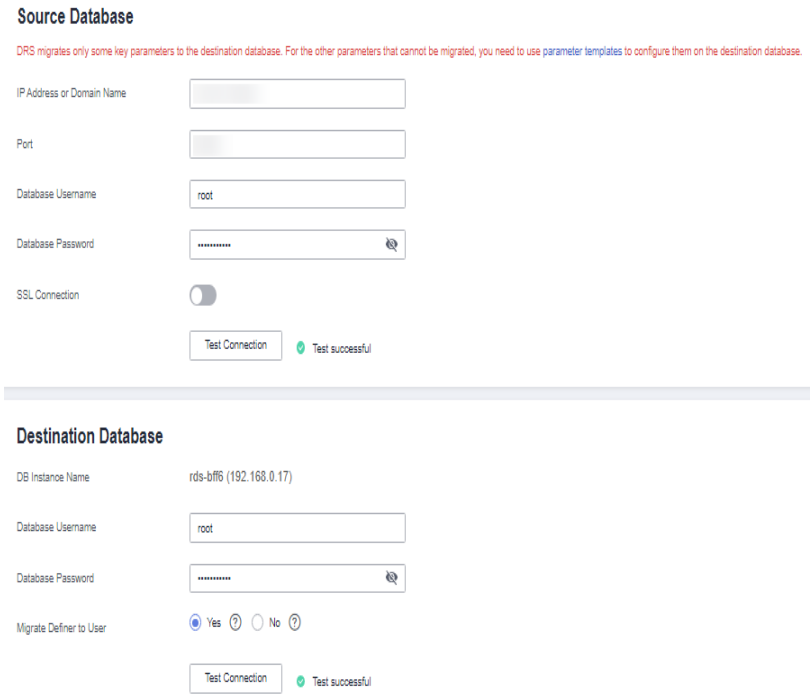
Step 3 Click **Create Now**.

It takes about 5 to 10 minutes to create a replication instance. After the replication instance is created, you can obtain its EIP.



Step 4 Configure the source and destination database information.

Figure 1-9 Configuring the source and destination databases



Step 5 Click **Next**.

Step 6 On the **Set Task** page, configure parameters as required.

- Set **Flow Control** to **No**.
- Set **Migration Object** to **All**.

Step 7 Click **Next**. On the **Check Task** page, check the migration task.

- If any check fails, review the cause and rectify the fault. After the fault is rectified, click **Check Again**.
- If all check items are successful, click **Next**.

Step 8 Compare source and destination database parameters.

- If you do not want to compare the parameters, click **Next** to skip this step.
- If there are inconsistent common parameter values, click **Save Change** to change the destination database values to match those of the source database.

Step 9 Click **Submit** to submit the task.

Return to the **Online Migration Management** page and check the migration task status.

It takes several minutes to complete.

If the status changes to **Completed**, the migration task is complete.

----End

1.7.2 Checking Migration Results

You can use either of the following methods to check the migration results:

1. Use DRS to compare migration objects, users, and data of source and destination databases and obtain the migration results. For details, see **Checking the Migration Results on the DRS Console**.
2. Log in to the destination instance to check whether the databases, tables, and data are migrated. For details, see **Checking the Migration Results on the FlexusRDS Console**.

Checking the Migration Results on the DRS Console

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

Step 2 Click  in the upper left corner and select your region.

Step 3 Under the service list, choose **Databases** > **Data Replication Service**.

Step 4 Click the DRS instance name.

Step 5 Click **Migration Comparison** in the navigation pane. Under the **Object-Level Comparison** tab, click **Compare** to check whether all objects have been migrated to the destination instance.

Step 6 Click the **Data-Level Comparison** tab. On the displayed page, click **Create Comparison Task** to check whether the databases and tables of the source and destination instances are the same.

Step 7 Click **Account-Level Comparison** and check whether the accounts and permissions of the source and destination instances are the same.

----End

Checking the Migration Results on the FlexusRDS Console

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

Step 2 Click  in the upper left corner and select your region.

Step 3 Under the service list, choose **Databases** > **Flexus RDS**.

Step 4 Locate the destination instance and click **Log In** in the **Operation** column.

Step 5 In the displayed dialog box, enter the password and click **Test Connection**.

Step 6 After the connection test is successful, click **Log In**.

Step 7 Check whether the databases and tables of the source instance have been migrated.

----End

