RDS for PostgreSQL

# Billing

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# Contents



# 1 Billed Items

## Description

You will be billed for the instance class, storage space, and backup space. For details, see **Table 1-1**.

NOTE

The billed items marked with asterisks (*) are mandatory.

**Table 1-1** DB instance billed items

| Billed Item | Description | Billing Mode | Formula |
| --- | --- | --- | --- |
| * Instance class | Billed by vCPUs, memory, and instance type. Computing and storage capabilities vary by the number of vCPUs and memory size. | Yearly/ Monthly and pay-per-use | **Unit price x Required duration**<br>For details about the unit price, see the price of each DB engine in **RDS Pricing Details**. |
| * Storage space | Billed based on unified standards. | Yearly/ Monthly and pay-per-use | **Unit price x Storage capacity x Required duration**<br>For details about the unit price, see the storage price in **RDS Pricing Details**. |

| Billed Item | Description | Billing Mode | Formula |
| --- | --- | --- | --- |
| * Backup space | Billed based on unified standards. | Pay-per-use | **Unit price x Billed backup capacity x Billed duration**<br>**The billed duration refers to the length of time the billed backup space was used for.**<br>For details about the unit price, see the backup space price in **RDS Pricing Details**. |
| (Optional) Cross-region backup | Billed by storage space based on unified standards. | Pay-per-use | **Unit price x Storage capacity x Required duration**<br>Unit price of storage space: $0.0002 USD/GB/hour |
| (Optional) EIP bandwidth | An EIP is required if the DB instance needs to access the Internet.<br>Billed by bandwidth, traffic, and the EIP reservation price.<br>• EIP for a yearly/monthly DB instance: billed by bandwidth.<br>• EIP for a pay-per-use DB instance: billed by bandwidth, traffic, or shared bandwidth. You are also charged for IP reservation if you do not bind the EIP to any instance. | Yearly/ Monthly and pay-per-use<br>You can purchase a bandwidth add-on package or a shared traffic package. | **Billed by fixed bandwidth**<br>For details about the unit price, see **EIP Pricing Details**. |
| (Optional) Deployment in DCC | Billed by the memory size | Yearly/ Monthly and pay-per-use | **Unit price x Memory size x Required duration**<br>For details about the unit price, see "MySQL Deployed in a DCC" in **RDS Pricing Details**. |

# 2 Billing Modes

## 2.1 Comparison of Billing Modes

There are yearly/monthly and pay-per-use billing modes. Each one has different advantages and disadvantages.

- Yearly/Monthly is a prepaid billing mode. You pay in advance for a subscription term, and in exchange, you get a discounted rate. The longer the subscription term, the bigger the discount. Yearly/Monthly billing is a good option for long-term, stable services.
- Pay-per-use is a postpaid billing mode. You pay as you go and just pay for what you use. The DB instance usage is calculated by the second but billed every hour. There are no wasted resources.

Table 2-1 lists the differences between the two billing modes.

**Table 2-1** Differences between billing modes

| Item | Yearly/Monthly | Pay-per-use |
| --- | --- | --- |
| Payment | Prepaid | Postpaid |
| Billing Method | Billed by the subscription term you purchase | Calculated by the second but billed every hour |
| Billed Items | Instance classes (vCPUs and memory), storage space, backup space, cross-region backup, deployment in Dedicated Computing Cluster (DCC), and EIPs | Instance classes (vCPUs and memory), storage space, backup space, cross-region backup, deployment in Dedicated Computing Cluster (DCC), and EIPs |

| Item | Yearly/Monthly | Pay-per-use |
| --- | --- | --- |
| Changing the Billing Mode | Yearly/Monthly can be changed to pay-per-use.<br>For details, see **Yearly/Monthly to Pay-per-Use**. | Pay-per-use can be changed to yearly/monthly.<br>For details, see **Pay-per-Use to Yearly/Monthly**. |
| Changing the instance class | Supported | Supported |
| Scaling up storage space | Supported | Supported |
| Changing an instance from single-node to primary/standby | Supported | Supported |
| Creating an instance using an API | Supported | Supported |
| Deleting an instance | Supported | Supported |
| Application Scenarios | Recommended for resources expected to be in use long-term. A cost-effective option for scenarios where the resource usage duration is predictable. | Recommended when the resource demands are likely to fluctuate and you want more flexibility. |

# 2.2 Yearly/Monthly Billing

If you expect to use resources for a longer period, you can save money by selecting yearly/monthly billing. This section describes the billing rules for yearly/monthly DB instances.

## Application Scenarios

If you want to ensure resource stability over a certain period of time, yearly/monthly billing is a good choice for the following types of workloads:

- Long-term workloads with stable resource requirements, such as official websites, online malls, and blogs.
- Long-term projects, such as scientific research projects and large-scale events.
- Workloads with predictable traffic bursts, for example, e-commerce promotions or festivals.

- Workloads with high data security requirements

## Billed Items

The following table lists the billed items of a yearly/monthly DB instance.

NOTE

The billed items marked with asterisks (*) are mandatory.

**Table 2-2** Billed items

| Billed Item | Description |
| --- | --- |
| * Instance class | vCPUs and memory |
| * Storage space | Database storage |
| * Backup space | RDS provides free backup space of the same size as your purchased database storage.<br>After the free backup space is used up, charges are applied based on the backup space pricing details. Pricing is listed on a per-hour basis, but bills are calculated based on the actual usage duration. |
| (Optional) Cross-region backup | RDS allows you to store backups in a region different from the one where your DB instance is located. Enabling cross-region backup will incur extra fees, and you will be billed for the storage space. Pricing is listed on a per-hour basis, but bills are calculated based on the actual usage duration. |
| (Optional) EIP bandwidth | If an EIP is purchased along with a DB instance, the EIP is billed by bandwidth. |
| (Optional) Deployment in DCC | RDS can be deployed in DCC, which incurs extra fees. |

## Billed Usage Period

A yearly/monthly DB instance is billed for the purchased duration. The billing starts from when you activated or renewed the subscription, and ends at 23:59:59 of the expiry date.

For example, if you purchased a one-month RDS DB instance on March 08, 2023, 15:50:04, the billed usage period is from March 08, 2023, 15:50:04 to April 08, 2023, 23:59:59.

## Price Change After Instance Class Change

If the instance class of a yearly/monthly DB instance no longer meets your needs, you can change the instance class on the console. The system will recalculate the price and either bill or refund you the difference.

- If you upgrade your DB instance class, you need to pay the difference in price.
- If you downgrade your DB instance class, Huawei Cloud will refund you the difference.

You are not advised to downgrade your DB instance to a lower instance class because the instance performance may be affected. Suppose you purchased a one-month RDS for PostgreSQL primary/standby DB instance (instance class: general-purpose, 2 vCPUs | 4 GB; storage: cloud SSD, 40 GB) in CN-Hong Kong on April 08, 2023 and upgraded the instance class to 4 vCPUs | 8 GB on April 18, 2023. The price of the original instance class was $88.69 USD/month, and that for the new instance class was $239.69 USD/month. The price difference will be calculated as follows:

**Price difference for the instance class upgrade = Price for the new instance class × Remaining period - Price for the original instance class × Remaining period**

The remaining period is the remaining days of each calendar month divided by the maximum number of days in each calendar month.

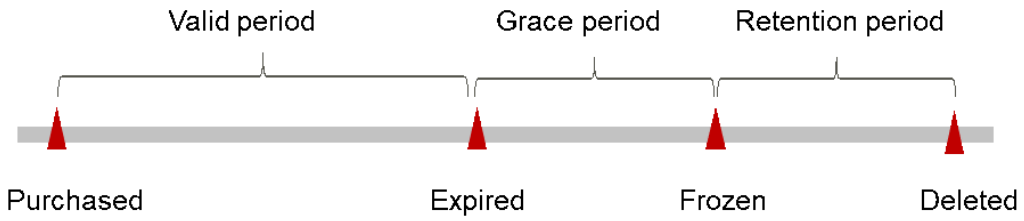
In this example, Remaining period = 12 (Remaining days in April)/30 (Maximum number of days in April) + 8 (Remaining days in May)/31 (Maximum number of days in May) = 0.6581. Cost of upgrade = $239.69 USD x 0.6581 – $88.69 USD x 0.6581 = $99.37 USD

For more details, see **Pricing of a Changed Specification**.

## Impact of Expiration

**Figure 2-1** shows the statuses a yearly/monthly DB instance can go through throughout its lifecycle. After a DB instance is purchased, it enters the valid period and runs normally during this period. If the DB instance is not renewed after it expires, before being deleted, it first enters a grace period and then a retention period.

**Figure 2-1** Lifecycle of a yearly/monthly DB instance




### Expiration Reminder

The system will send you a reminder (by email, SMS, or in-app message) before a yearly/monthly DB instance expires to remind you to renew the subscription.

- The system will send you a reminder 30 days, 15 days, 7 days, 3 days, and 1 day before a yearly instance expires.
- The system will send you a reminder 15 days, 7 days, 3 days, and 1 day before a monthly instance expires.

### Impact of Expiration

If your yearly/monthly DB instance is not renewed after it expires, it changes to the **Expired** state and enters a grace period. During the grace period, you can access the DB instance but cannot:

- Change instance class
- Change the billing mode to pay-per-use
- Unsubscribe from the DB instance

If the yearly/monthly DB instance is not renewed after the grace period ends, its status turns to **Frozen** and it enters a retention period. You cannot access or use the DB instance while it is in the retention period, but the data stored in it can be retained.

If the yearly/monthly DB instance is not renewed by the time the retention period ends, the corresponding resources will be released and the data stored in the resources will be deleted.

NOTE

- During the retention period, you cannot access or use your DB instance but the data stored in it can be retained. The retention period for the Huawei Cloud International website is 15 days.
- During the grace period, you can access and use only some resources of your DB instance. The grace period for the Huawei Cloud International website is 15 days.
- For details about renewal, see **Renewing Subscriptions**.

# 2.3 Pay-per-Use Billing

Pay-per-use billing means you pay nothing up front and are not tied into any contract or commitment. This section describes the billing rules for pay-per-use DB instances.

## Application Scenarios

Pay-per-use billing is good for short-term or unpredictable workloads.

## Billed Items

You are billed for the following items on a pay-per-use basis.

NOTE

The billed items marked with asterisks (*) are mandatory.

**Table 2-3** Items billed on a pay-per-use basis

| Billed Item | Description |
| --- | --- |
| * Instance class | vCPUs and memory |
| * Storage space | Database storage |

| Billed Item | Description |
| --- | --- |
| * Backup space | RDS provides free backup space of the same size as your purchased database storage.<br>After the free backup space is used up, charges are applied based on the backup space pricing details. Pricing is listed on a per-hour basis, but bills are calculated based on the actual usage duration. |
| (Optional) Cross-region backup | RDS allows you to store backups in a region different from the one where your DB instance is located. Enabling cross-region backup will incur extra fees, and you will be billed for the storage space. Pricing is listed on a per-hour basis, but bills are calculated based on the actual usage duration. |
| (Optional) EIP bandwidth | If an EIP is purchased along with a DB instance, the EIP is billed by bandwidth. |
| (Optional) Deployment in DCC | RDS can be deployed in DCC, which incurs extra fees. |

## Billed Usage Period

Pay-per-use DB instance usage is calculated by the second and billed every hour. The billing starts when the DB instance is created and ends when the instance is deleted.

NOTE

It takes a certain time to create a DB instance. The billing starts from the **Completed** time on the **Instant Tasks** page in the task center.

For example, if you purchased a pay-per-use DB instance at 8:45:30 and deleted it at 8:55:30, you are billed for the 600 seconds from 8:45:30 to 8:55:30.

## Price Change After Instance Class Change

If you change the instance class of a pay-per-use DB instance, the original order will become invalid and a new order will be placed. You will be billed based on the new instance class.

If you change the instance class within a given hour, multiple records will be generated. Different records record the billing for different instance classes.

For example, if you purchased a pay-per-use DB instance (2 vCPUs | 4 GB) at 9:00:00 and changed the instance class to 4 vCPUs | 8 GB at 9:30:00, the following items will be billed:

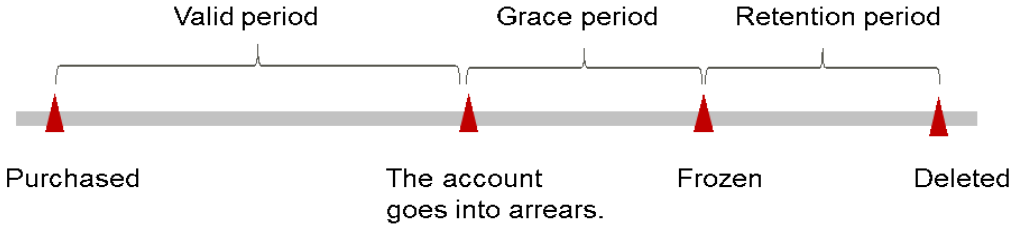
- DB instance (2 vCPUs | 4 GB) usage from 9:00:00 to 9:30:00
- DB instance (4 vCPUs | 8 GB) usage from 9:30:00 to 10:00:00

## Impact of Arrears

Figure 2-2 shows the statuses a pay-per-use DB instance can have throughout its lifecycle. After a DB instance is purchased, it enters the valid period and runs normally during this period. If your account goes into arrears, the DB instance enters a grace period and then a retention period.

**Figure 2-2** Lifecycle of a pay-per-use DB instance




### Arrears Reminder

The system will bill you for pay-per-use resources after each billing cycle ends. If your account goes into arrears, we will notify you by email, SMS, or in-app message.

### Impacts of Arrears

If your account is insufficient to pay your amount due, your account goes into arrears, and the pay-per-use DB instance enters the grace period. You are still responsible for expenditures generated during the grace period. You can view the charges on the **Billing Center** > **Overview** page and pay any past due balance as needed.

If you do not bring your account balance current before the grace period expires, the DB instance turns to **Frozen** and enters a retention period. You cannot access or use the DB instance while it is in the retention period, but the data stored in it can be retained.

If you do not bring your account balance current before the retention period ends, the corresponding resources will be released and the data stored in the resources will be deleted.

**NOTE**

- During the retention period, you cannot access or use your DB instance but the data stored in it can be retained. The retention period for the Huawei Cloud International website is 15 days.
- During the grace period, you can access and use only some resources of your DB instance. The grace period for the Huawei Cloud International website is 15 days.
- For details about top-up, see **Topping Up an Account**.

# 3 Billing Examples

## Billing Scenario

A user purchased a pay-per-use RDS for PostgreSQL 16 DB instance in CN-Hong Kong at 15:30:00 on March 18, 2025. The DB instance configuration is as follows:

- Instance class: dedicated, 4 vCPUs | 32 GB, primary/standby
- Storage space: cloud SSD, 40 GB
- EIP bandwidth: 6 Mbit/s

After a period of time, the user found that the current instance class no longer met service requirements and scaled up the storage to 80 GB at 8:00:00 on March 19, 2025, then updated the instance class to 8 vCPUs | 16 GB at 9:00:00 on March 20, 2025. Since the user wanted to use the DB instance long term, the user then changed the instance to yearly/monthly billing with a one-month duration at 10:30:00 on the same day. So how much will the user be billed for this DB instance in March and April?

## Billing Analysis

The total price of this DB instance involves both pay-per-use and yearly/monthly usage:

- Pay-per-use usage: March 18, 2025, 15:30:00 to March 20, 2025, 10:30:00
  - From March 18, 2025, 15:30:00 to March 19, 2025, 8:00:00
    - Instance class: dedicated, 4 vCPUs | 32 GB, primary/standby
    - Storage space: cloud SSD, 40 GB (plus an additional 40 GB of free backup space)
    - Used backup space: 30 GB (The 30 GB is free since it stays within the free limit of 40 GB.)
    - EIP bandwidth: 6 Mbit/s
  - From March 19, 2025, 8:00:00 to March 20, 2025, 9:00:00
    - Instance class: dedicated, 4 vCPUs | 32 GB, primary/standby

        - Storage space: cloud SSD, 80 GB (plus an additional 80 GB of free backup space)
        - Used backup space: another 40 GB (The cumulative total of 70 GB (30 + 40) backup space has been used. The 70 GB is free since it does not exceed the free limit of 80 GB.)
        - EIP bandwidth: 6 Mbit/s
    - From March 20, 2025, 9:00:00 to March 20, 2025, 10:30:00
        - Instance class: dedicated, 8 vCPUs | 16 GB, primary/standby
        - Storage space: cloud SSD, 80 GB (plus an additional 80 GB of free backup space)
        - Used backup space: another 15 GB (The cumulative total of 85 GB (30 + 40 + 15) backup space has been used. If the extra 5 GB was used at 10:00:00 on March 20, 2025, the fee was charged during the period from 10:00:00 to 10:30:00 on March 20, 2025.)
        - EIP bandwidth: 6 Mbit/s
- Yearly/monthly usage: March 20, 2025, 10:30:00 to April 20, 2025, 23:59:59
    - Instance class: dedicated, 8 vCPUs | 16 GB, primary/standby
    - Storage space: cloud SSD, 80 GB (plus an additional 80 GB of free backup space)
    - Used backup space: No new backup space is used. (The cumulative total of 85 GB (30 + 40 + 15) backup space has been used. The charged space is still 5 GB, and the charged period is from March 20, 2025, 10:30:00 to April 20, 2025, 23:59:59.)
    - EIP bandwidth: 6 Mbit/s
    - Billed duration: one month

**NOTICE**

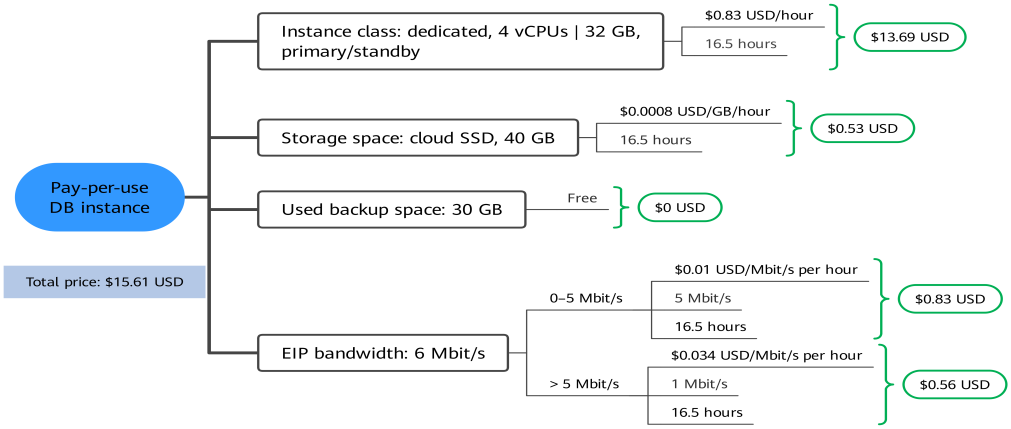
The prices in the figure are just examples. The actual prices are those displayed on **RDS Pricing Details**.

For pay-per-use billing, decimal numerals on the price calculator are rounded off and are accurate to two decimal places. If the fee is less than $0.01 USD (after rounding off), $0.01 USD will be displayed.

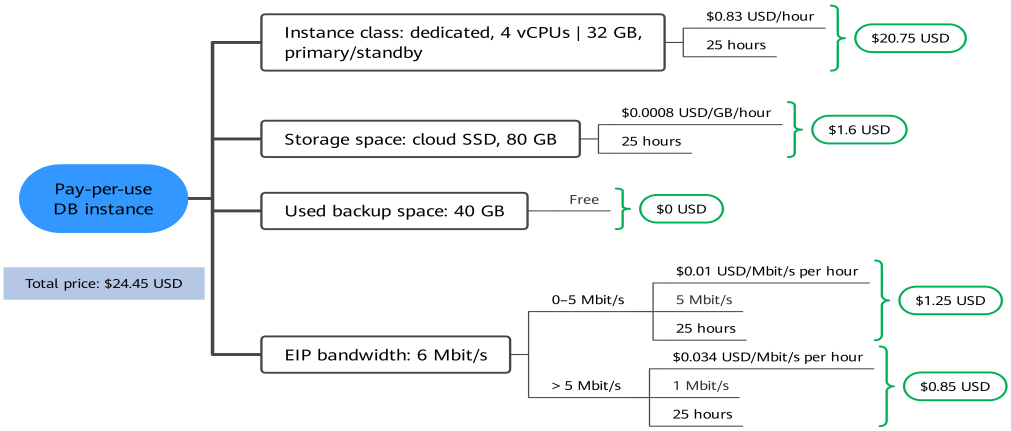
**Pay-per-use**

From March 18, 2025, 15:30:00 to March 19, 2025, 8:00:00, a DB instance with 4 vCPUs, 32 GB of memory, and 40 GB of storage was used for 16.5 hours, so the price would be calculated as follows:

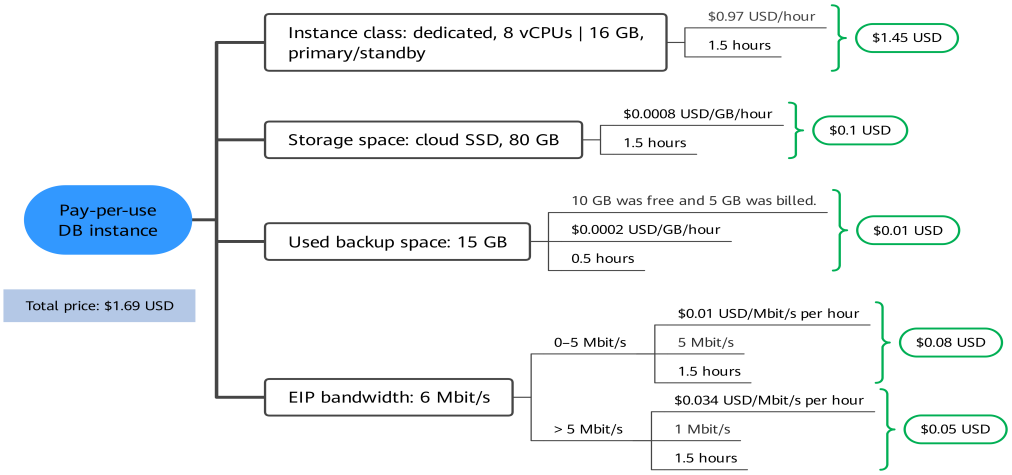



From March 19, 2025, 8:00:00 to March 20, 2025, 9:00:00, a DB instance with 4 vCPUs, 32 GB of memory, and 80 GB of storage was used for 25 hours, so the price would be calculated as follows:



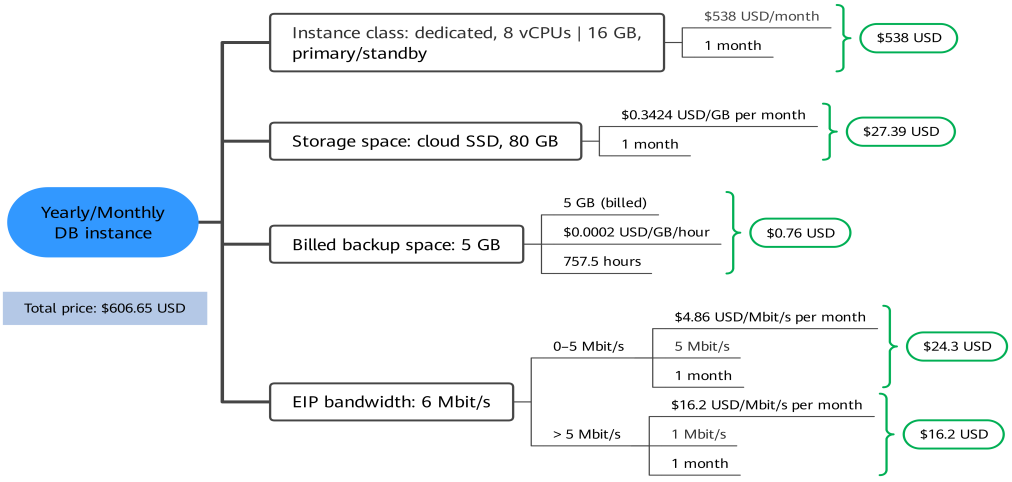

From March 20, 2025, 9:00:00 to March 20, 2025, 10:30:00, a DB instance with 8 vCPUs, 16 GB of memory, and 80 GB of storage was used for 1.5 hours, so the price would be calculated as follows:




### Yearly/Monthly

From March 20, 2025, 10:30:00 to April 20, 2025, 23:59:59, a DB instance purchased using yearly/monthly billing was used for one month, so the price would be calculated as follows:




From March to April, the total price of this DB instance is $648.4 USD (15.61 + 24.45 + 1.69 + 606.65).

# 4 Billing Mode Changes

## 4.1 Pay-per-Use to Yearly/Monthly

If you have a pay-per-use DB instance that you expect to use for a long time, you can change it to yearly/monthly billing to reduce costs. Doing so will create an order. After you pay for the order, yearly/monthly billing will be applied immediately.

### Constraints

Pay-per-use instances in any of the following statuses cannot be changed to yearly/monthly: frozen, creation failed, changing instance class, and scaling up.

Changing the billing mode of your RDS instance will change that of the instance class, storage space, image, and dedicated resources.

- To change the EIP billing mode, see **Changing the Billing Mode of an EIP from Pay-per-Use to Yearly/Monthly**.
- The backup space and cross-region backup storage space can only be billed on a pay-per-use basis.

### Changing the Billing Mode of an RDS Instance from Pay-per-Use to Yearly/Monthly

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

**Step 2** Click in the upper left corner and select a region and a project.

**Step 3** Click in the upper left corner of the page and choose **Databases** > **Relational Database Service**.

**Step 4** On the **Instances** page, locate the target DB instance and choose **More** > **Change to Yearly/Monthly** in the **Operation** column.

**Step 5** Select the renewal duration, in months. The minimum duration is one month.

- If you do not need to modify your settings, click **Pay** to go to the payment page.

- If you are not sure about the settings, the system will reserve your order. You can choose **Billing & Costs** > **Unpaid Orders** in the upper right corner and pay or cancel the order. The instance status is **Changing to Yearly/Monthly. Payment incomplete. Pay Now.**

**Step 6** Select a payment method and click **Confirm**.

**Step 7** View the result on the **Instances** page.

In the upper right corner of the instance list, click  to refresh the list. The instance status will become **Available** and the billing mode will become yearly/monthly after the change is complete.

**----End**

## Changing the Billing Mode of an EIP from Pay-per-Use to Yearly/Monthly

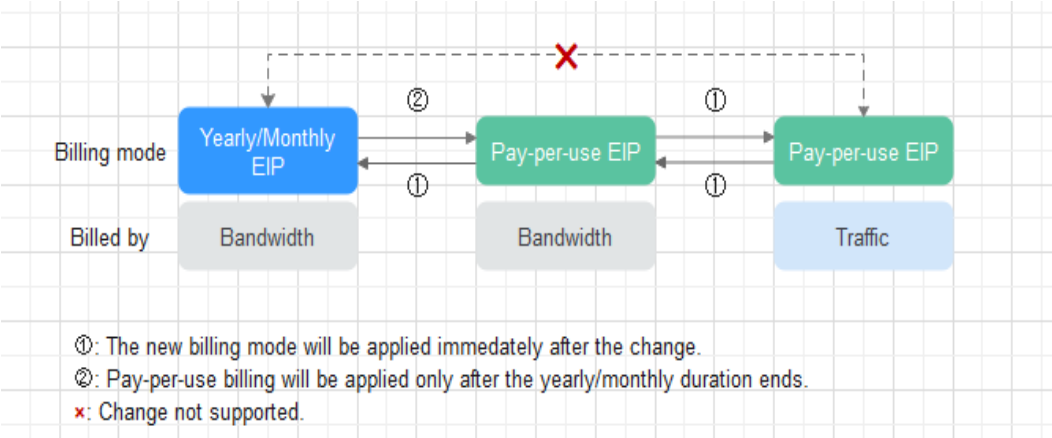
Resources such as the EIP that is used by a DB instance may not support the change with this instance. For details about their billing mode change rules and handling methods, see **Table 4-1**.

**Table 4-1** EIP billing mode change rules

| Resource | Billing Mode | Billed By | Bandwidth Type | Change to Yearly/Monthly Billing with the DB instance | Handling Measure |
|---|---|---|---|---|---|
| EIP | Pay-per-use | Bandwidth | Dedicated | Not supported | Change the EIP to yearly/monthly billing on the EIP console.<br>For details, see **Changing EIP Billing Mode**. |
| EIP | Pay-per-use | Traffic | Dedicated | Not supported | An EIP that is billed by traffic on a pay-per-use basis cannot be directly changed to be billed on a yearly/monthly basis. To change this:<br>1. Change the EIP to be billed by bandwidth on a pay-per-use basis.<br>2. Change the EIP to be billed on a yearly/monthly basis.<br>For details, see **Changing EIP Billing Mode**. |

**Figure 4-1** EIP billing mode change




## FAQ

Q: What Bills Are Generated After the Billing Mode of an RDS DB Instance Is Changed from Pay-per-Use to Yearly/Monthly?

A: Suppose you bought a pay-per-use DB instance at 15:29:16 on April 18, 2023 and changed it to yearly/monthly billing at 16:30:30 on the same day. After you paid for the order, yearly/monthly billing was applied immediately. On the **Billing Center** > **Billing** page, three line items were generated, one for each of the hours the DB instance was used on a pay-per-use basis, and one for the yearly/monthly subscription:

- Pay-per-use expenditures for 15:29:16 to 16:00:00 on April 18, 2023
- Pay-per-use expenditures for 16:00:00 to 16:30:30 on April 18, 2023
- A single, yearly/monthly expenditure generated on April 18, 2023, 16:30:30

# 4.2 Yearly/Monthly to Pay-per-Use

After creating a yearly/monthly DB instance, you can change it to pay-per-use for more flexibility, and you can recoup part of what you paid for the subscription.

**NOTICE**

The pay-per-use billing mode will be applied only after the yearly/monthly billed duration ends and auto-renewal will be not in effect.

## Constraints

Changing the billing mode of your RDS instance will change that of the instance class, storage space, image, and dedicated resources.

- To change the EIP billing mode, see **Changing the Billing Mode of an EIP from Yearly/Monthly to Pay-per-Use**.

- The backup space and cross-region backup storage space can only be billed on a pay-per-use basis.

## Changing the Billing Mode of an RDS Instance from Yearly/Monthly to Pay-per-Use

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

**Step 2** Click  in the upper left corner and select a region and a project.

**Step 3** Click  in the upper left corner of the page and choose **Databases** > **Relational Database Service**.

**Step 4** On the **Instances** page, locate the target DB instance and choose **More** > **Change to Pay-per-use** in the **Operation** column.

**Step 5** In the displayed dialog box, click **Yes**.

**Step 6** Confirm the instance billing information and click **Change to Pay-per-Use**.

**----End**

## Changing the Billing Mode of an EIP from Yearly/Monthly to Pay-per-Use

Resources such as the EIP that is used by a DB instance may not support the change with this instance. For details about their billing mode change rules and handling methods, see **Table 4-2**.

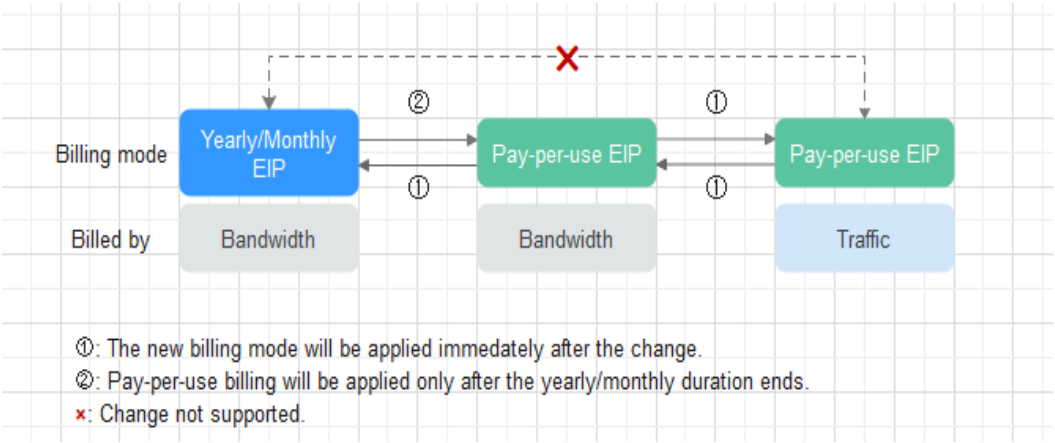
**Table 4-2** EIP billing mode change rules

| Resource | Billing Mode | Billed By | Bandwidth Type | Change to Pay-per-Use Billing with the DB Instance | Handling Measure |
|---|---|---|---|---|---|
| EIP | Yearly/Monthly | Bandwidth | Dedicated | Not supported | Change the EIP to yearly/monthly billing on the EIP console.<br>For details, see **Changing EIP Billing Mode**. |

| Resource | Billing Mode | Billed By | Bandwidth Type | Change to Pay-per-Use Billing with the DB Instance | Handling Measure |
|---|---|---|---|---|---|
| EIP | Yearly/Monthly | Traffic | Dedicated | Not supported | An EIP billed on a yearly/monthly basis cannot be directly changed to be billed by traffic on a pay-per-use basis. To change this:<br>1. Change the EIP to be billed by bandwidth on a pay-per-use basis.<br>2. Change the EIP to be billed by traffic on a pay-per-use basis.<br>For details, see **Changing EIP Billing Mode**. |

**Figure 4-2** EIP billing mode change




## FAQ

Q: What Bills Are Generated After the Billing Mode of an RDS DB Instance Is Changed from Yearly/Monthly to Pay-per-Use?

A: Suppose you bought a yearly/monthly DB instance at 15:29:16 on April 18, 2023 and changed it to pay-per-use billing at 16:30:00 on May 18, 2023. On the **Billing Center** > **Billing** page, bills are generated as follows:

- Yearly/Monthly expenditures for 15:29:16 on April 18 to 23:59:59 on May 18, 2023
- Pay-per-use expenditures for 23:59:59 on May 18, 2023 to the end time of pay-per-use usage. A bill was generated every hour.

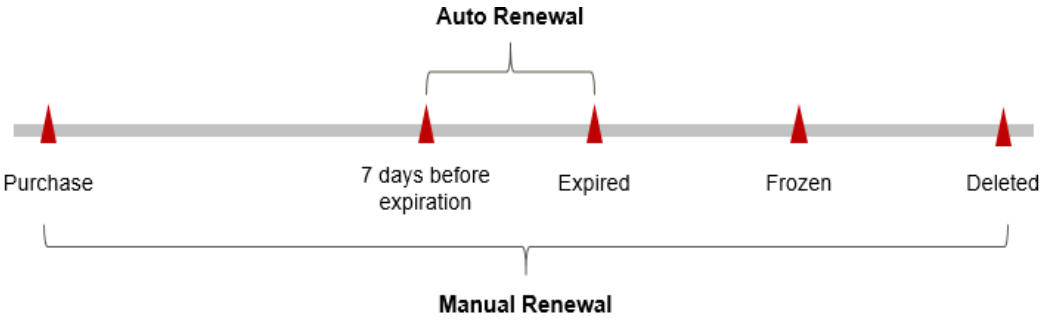
# 5 Renewing Subscriptions

## 5.1 Manually Renewing a DB Instance

If a yearly/monthly DB instance is about to expire but you want to continue using it, you need to renew the DB instance subscription within a specified period, or resources, such as vCPUs and memory, will be automatically released, and data will be lost and cannot be restored.

You can renew a yearly/monthly DB instance on the console any time before it is automatically deleted due to arrears.

**Figure 5-1** DB instance lifecycle




For details about the instance status in each phase of its lifecycle, see **Impact of Expiration**.

### Constraints

Only yearly/monthly DB instance subscriptions can be renewed. If you use a pay-per-use instance, just ensure that your account has a valid payment method configured or a top-up account with a sufficient balance.

### Renewing a DB Instance on the Console

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

**Step 2** Click in the upper left corner and select a region and a project.

**Step 3** Click in the upper left corner of the page and choose **Databases** > **Relational Database Service**.

**Step 4** On the **Instances** page, locate the DB instance you want to renew and choose **More** > **Renew** in the **Operation** column.

**Step 5** On the displayed page, renew the DB instance.

**----End**

## Renewing a Subscription in the Billing Center

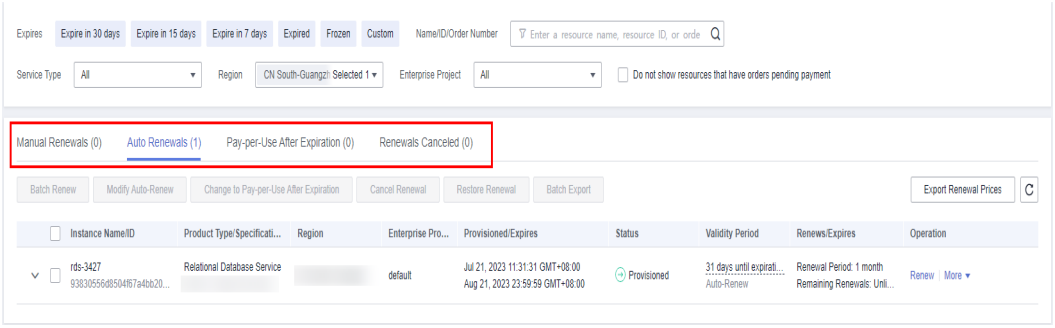
**Step 1** Log in to the management console.

**Step 2** Hover over **Billing** in the upper part of the console and choose **Renewal** from the drop-down list.

**Step 3** Set the search criteria.

On the **Manual Renewals**, **Auto Renewals**, **Pay-per-Use After Expiration**, and **Renewals Canceled** pages, you can view the DB instances to be renewed.

**Figure 5-2** Renewal management

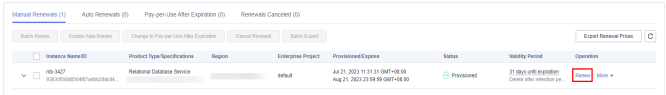



You can move all DB instances that need to be manually renewed to the **Manual Renewals** tab page. For details, see **Enabling Manual Renewal**.

**Step 4** Manually renew DB instances.

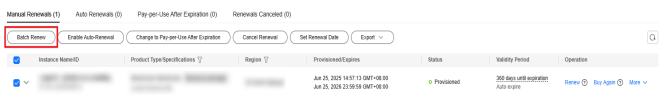
- Individual renewal: Click **Renew** in the **Operation** column for the desired DB instance.

  **Figure 5-3** Individual renewal

- Batch renewal: Check the boxes for the desired DB instances, and click **Batch Renew** in the upper left corner.

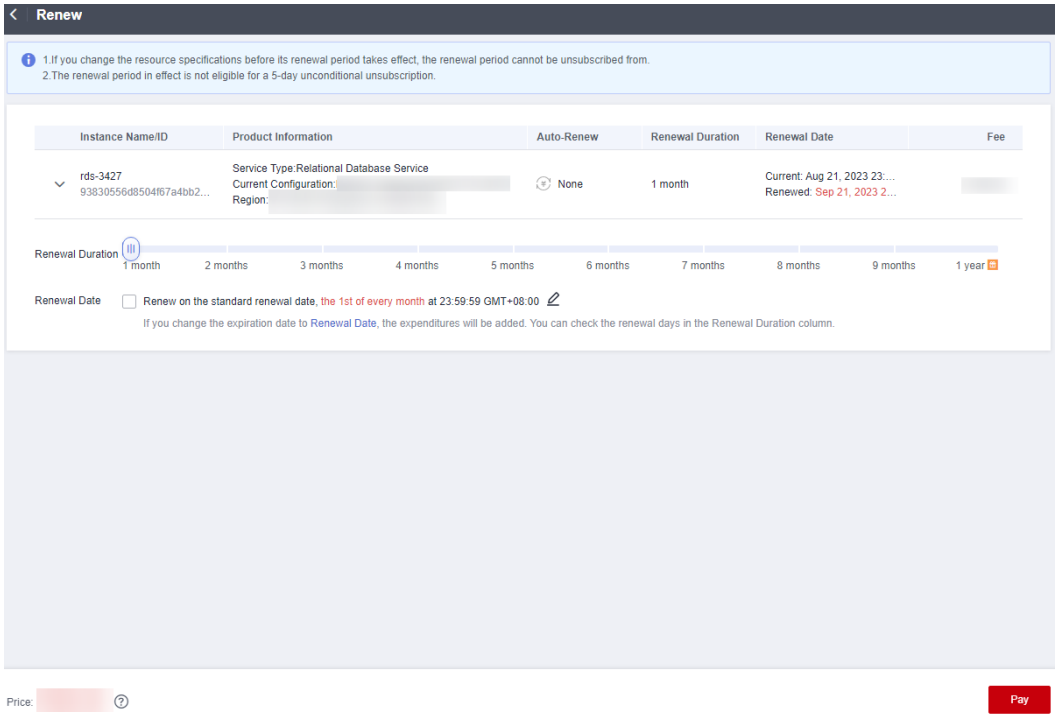
  **Figure 5-4** Batch renewal

**Step 5** Select a renewal duration and optionally select **Renew on the standard renewal date**. For details, see **Setting the Same Renewal Day for Yearly/Monthly DB Instances**. Confirm the price and click **Pay**.

**Figure 5-5** Confirming renewal




**Step 6** Select a payment method and make your payment. Once the order is paid, the renewal is complete.

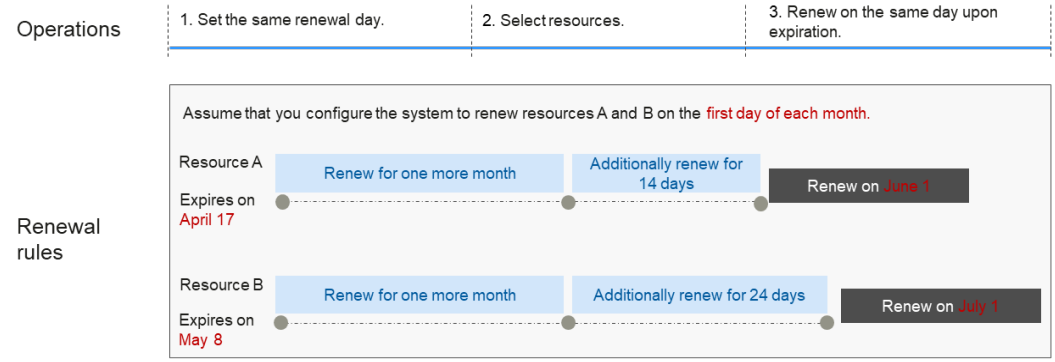
**----End**

## Setting the Same Renewal Day for Yearly/Monthly DB Instances

If the DB instances have different expiry dates, you can set the same renewal day, for example, the first day of each month, to make it easier to manage renewals.

In **Figure 5-6**, a user sets the same renewal day for two resources that will expire at different dates.

**Figure 5-6** Setting the same renewal day for resources with different expiry dates



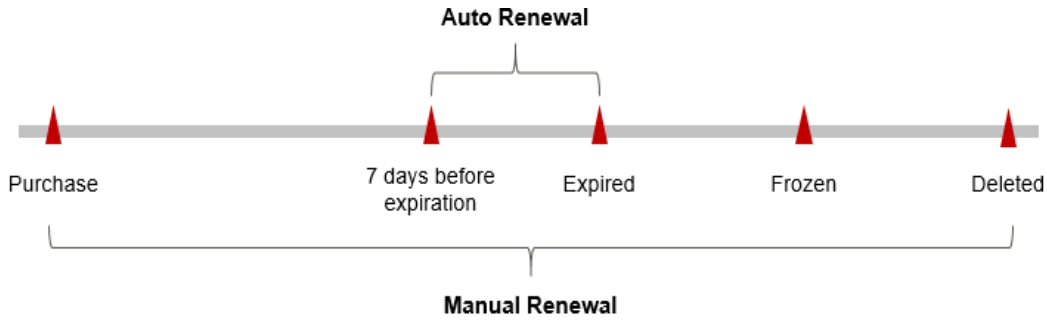
For details, see **Renewal Date**.

# 5.2 Auto-Renewing a DB Instance

If a yearly/monthly DB instance is about to expire but you want to continue using it, you need to renew the DB instance subscription within a specified period, or resources, such as vCPUs and memory, will be automatically released, and data will be lost and cannot be restored.

If a DB instance is auto-renewed before it expires, resources will be retained and you can continue using the instance. For details about DB instance statuses after they have expired and the associated impacts, see **Impact of Expiration**.

**Figure 5-7** DB instance lifecycle




## Auto-Renewal Rules

Auto-renewal can prevent DB instances from being automatically deleted if you forget to manually renew them. The auto-renewal rules are as follows:

- The first auto-renewal date is based on when the DB instance expires and the billing cycle.
- The auto-renewal period of a DB instance depends on the subscription term.
  - Monthly subscriptions renew each month.
  - Yearly subscriptions renew each year.
- You can enable auto-renewal any time before a DB instance expires. By default, the system will make the first attempt to charge your account for the renewal at 03:00 seven days before the expiry date. If this attempt fails, it will make another attempt at 03:00 every day until the subscription is renewed or expires.
- After auto-renewal is enabled, you can still renew the DB instance manually if you want to. After a manual renewal is complete, auto-renewal is still valid, and the renewal fee will be deducted from your account seven days before the new expiry date
- By default, the renewal fee is deducted from your account seven days before the new expiry date. You can change this auto-renewal payment date as required.

For more information about auto-renewal rules, see **Auto-Renewal Rules**.

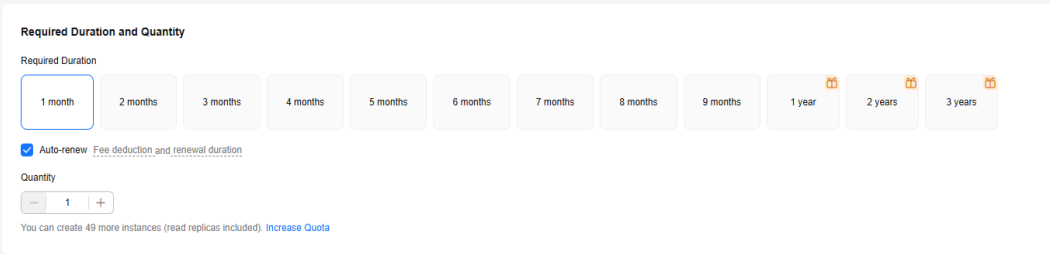
## Constraints

Only yearly/monthly DB instance subscriptions can be renewed. If you use a pay-per-use instance, just ensure that your account has a valid payment method configured or a top-up account with a sufficient balance.

## Enabling Auto-Renewal During Purchase

You can enable auto-renewal on the DB instance purchase page, as shown in **Figure 5-8**. For details, see **Buying a DB Instance**.

**Figure 5-8** Enabling auto-renewal




## Enabling Auto-Renewal on the Renewals Page

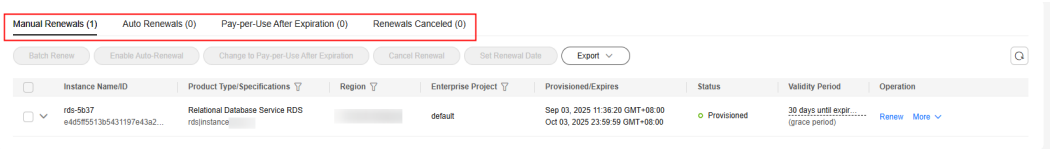
**Step 1** Log in to the management console.

**Step 2** Hover over **Billing** in the upper part of the console and choose **Renewal** from the drop-down list.

**Step 3** Set the search criteria.

- You can view the DB instances for which auto-renewal has been enabled on the **Auto Renewals** page.
- You can enable auto-renewal for DB instances on the **Manual Renewals**, **Pay-per-Use After Expiration**, and **Renewals Canceled** pages.

**Figure 5-9** Renewals




**Step 4** Enable auto-renewal for yearly/monthly DB instances.

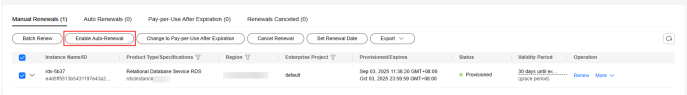
- Enabling auto-renewal for a single instance: Locate the instance for which you want to enable auto-renewal and click **Enable Auto-Renewal** in the **Operation** column.

**Figure 5-10** Enabling auto-renewal for a single instance

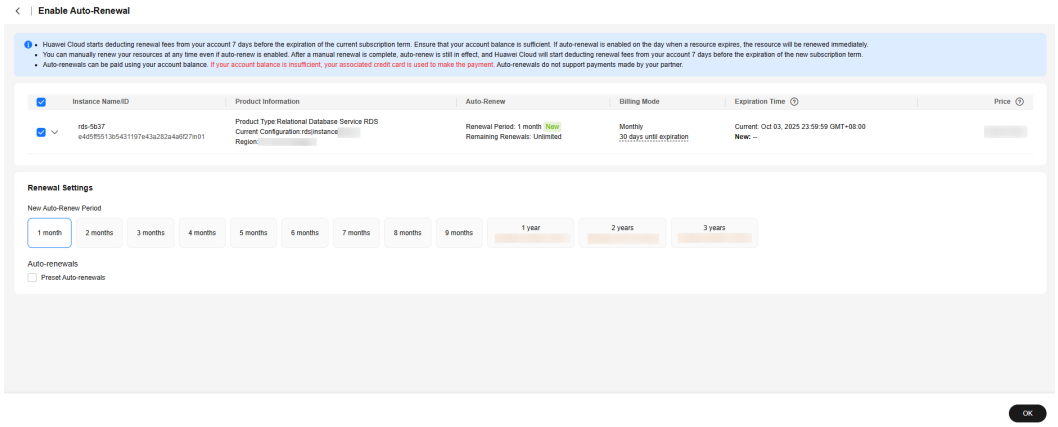
- Enabling auto-renewal for multiple instances at a time: Select the instances for which you want to enable auto-renewal and click **Enable Auto-Renewal** above the list.

  **Figure 5-11** Enabling auto-renewal for multiple instances




**Step 5** Select a renewal period, specify the auto-renewal times, and click **Pay**.

**Figure 5-12** Enabling auto-renewal




**----End**

# 6 Bills

You can view the resource usage and bills for different billing cycles on the **Billing** page in the Billing Center.

## Bill Generation

Transaction records for yearly/monthly subscriptions are generated immediately after being paid for.

A pay-per-use DB instance is billed by the hour, day, or month, depending on the instance's usage type. The DB instance usage is billed by the hour. For details, see **Bill Run for Pay-per-Use Resources**.

You are not charged immediately after a record is generated. For example, if a pay-per-use DB instance (which is billed on an hourly basis) is deleted at 08:30, you will still have expenditures for the 08:00 to 09:00 hour. However, but you will not likely be billed for the 08:00 to 09:00 hour until about 10:00. On the **Billing** page of the Billing Center, select the **Expenditure Details** tab. **Expenditure Time** in the bill indicates the time when the pay-per-use DB instance is used.

## Viewing Bills of a Specific Resource on the Console

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

**Step 2** Click  in the upper left corner and select a region and a project.

**Step 3** Click  in the upper left corner of the page and choose **Databases** > **Relational Database Service**.

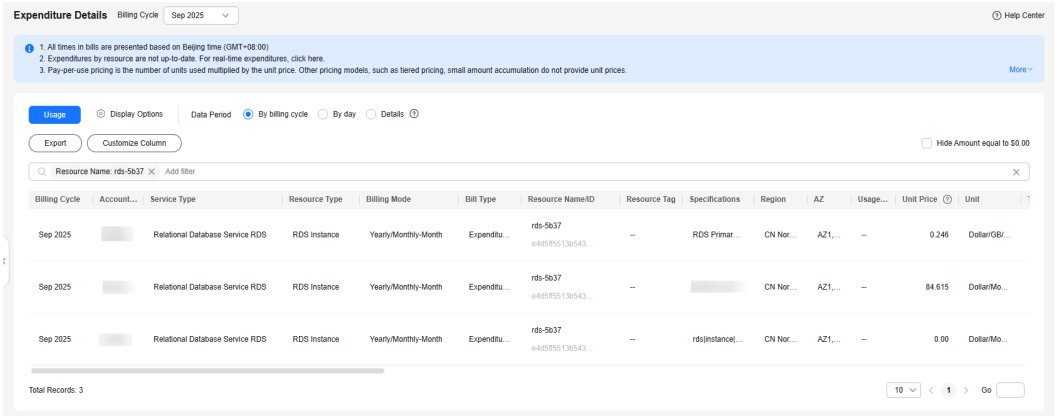
**Step 4** On the **Instances** page, copy the instance name.

**Step 5** On the top menu bar, choose **Billing** > **Bills**.

**Step 6** On the **Expenditure Details** page, select **Resource Name** as the filter criteria, enter the obtained instance name, and click the  icon.

**Figure 6-1** Searching for a bill




By default, the bill details are displayed by usage and billing cycle. You can choose other display options as required. For details, see **Bills**.

**----End**

## Viewing Bills of a Specific Resource Using an API

You can call APIs to query bills of cloud resources. For details, see **Viewing Resource Usage Details**.

You can specify **cycle** and **cloud_service_type** in the request to query RDS resource bills and then use **root_resource_id** (instance ID) to find the bill details of a desired instance in the response.

## Checking the Consistency of the Actual Usage and Billed Usage

Assume that you purchased a pay-per-use DB instance at 10:37:19 on August 08, 2023 and deleted it later that day, at 12:47:11.

- Transaction Records

  Pay-per-use DB instance usage is calculated by the second but billed on an hourly basis. You can check the transaction records against the actual usage. The billed resources are billed separately. For details, see **Table 6-1** (taking storage as an example).

  **Table 6-1** DB instance transaction records

| | |
|---|---|
| **Service Type** | RDS |
| **Specifications** | Primary/standby storage \| cloud SSD \| 40 GB |
| **Billing Mode** | Pay-per-use |

| | |
|---|---|
| **Expenditure Time** | For the period of time from 10:37:19 to 12:47:11, 3 transaction records would be generated for the resource usage in the following periods:<br>• 2023/08/08 10:37:19 - 2023/08/08 11:00:00<br>• 2023/08/08 11:00:00 - 2023/08/08 12:00:00<br>• 2023/08/08 12:00:00 - 2023/08/08 12:47:11 |
| **List Price** | List price on the official website = Usage x Unit price x Capacity<br>The DB instance was used for 1,361 seconds in the first period, and the storage unit price can be obtained on the **RDS Pricing Details** page. The list price for the first period = (1,361 ÷ 3,600) x 0.0008 x 40 = $0.01209777 USD. Similarly, you can calculate the storage list price for the other periods. |
| **Discounted Amount** | Discounts offered for cloud services, for example, commercial discounts, partner authorized discounts, and promotional discounts. It is the discounted amount based on the list price. |
| **Truncated Amount** | Huawei Cloud billing is calculated to the 8th decimal place. However, the amount due is truncated to the 2nd decimal place. The third and later decimal places are referred to as the truncated amounts.<br>Take the first period as an example. The truncated amount is $0.00209777 USD. |
| **Amount Due** | Amount due = List price – Discount amount – Truncated amount<br>Take the first period as an example. If the discount amount is 0, the amount due is $0.01 USD (0.01209777 - 0 - 0.00209777). |

- DB instance bill details

  Bill details can display in multiple ways. By default, the bill details of a resource are displayed by usage and by billing cycle. **Table 6-2** illustrates the DB instance bill details, which can be used to check against the actual usage (taking storage as an example).

  **Table 6-2** DB instance bill details

| | |
|---|---|
| **Service Type** | RDS |
| **Resource Type** | DB instance |
| **Billing Mode** | Pay-per-use |
| **Resource Name/ID** | Instance name/ID |

| | |
|---|---|
| **Specifications** | Primary/standby storage \| cloud SSD \| 40 GB |
| **Usage Type** | Duration for a pay-per-use DB instance |
| **Unit Price** | When pay-per-use billing is used, the unit price is only provided if the amount is equal to the usage multiplied by the unit price. No unit price is provided in other pricing modes, for example, tiered pricing.<br>You can search for the unit price for pay-per-use DB instances on the **RDS Pricing Details** page. |
| **Unit** | Displayed on the **RDS Pricing Details** page.<br>Example: USD/GB/hour |
| **Usage** | Depends on the unit of the unit price, which is USD/GB/hour. Storage usage is billed by the hour. Example: 2.1644444444 hours |
| **Usage Unit** | Hour |
| **List Price** | List price on the official website = Usage x Unit price x Capacity<br>The DB instance was used for 2.1644444444 hours in total, and the storage unit price can be obtained on the **RDS Pricing Details** page. The list price = 2.1644444444 x 0.0008 x 40 = $0.06926222 USD. |
| **Discounted Amount** | Discounts offered for cloud services, for example, commercial discounts, partner authorized discounts, and promotional discounts. It is the discounted amount based on the list price. |
| **Amount Due** | Amount that should be paid for used cloud services after discounts are applied. |

# 7 Arrears

If your configured payment method is unable to pay for your bill, your account will be in arrears. You will need to update you payment method or to top up your account in a timely manner if you want to continue using your cloud services.

## Arrears Reason

If your DB instance is not billed at a yearly/monthly basis, your account falls into arrears any time your configured payment method is unable to pay for the used resources on the pay-per-use basis.

## Arrears Impact

- Yearly/Monthly

  This is a pre-paid billing mode, so you can continue using yearly/monthly DB instances even if your account is in arrears. However, you cannot perform operations such as purchasing new DB instances, scaling up storage space, upgrading instance classes, or renewing DB instances, because they will generate new expenditures.

- Pay-per-Use

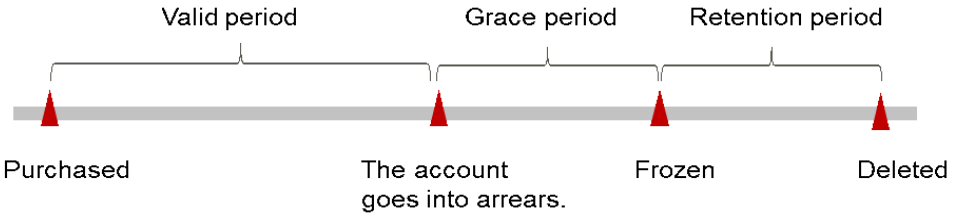
  If your configured payment method is unable to pay a bill for pay-per-use resources, the resources enter a grace period. After you top up your account, Huawei Cloud will bill you for expenditures generated by the resources during the grace period. You can view the expenditures on the **Overview** page of the Billing Center.

  If your account is still in arrears after the grace period ends, the resources enter the retention period and their status turns to **Frozen**. You cannot perform any operations on these resources.

  After the retention period ends, the compute resources (vCPUs and memory) and EIPs will be released and the data cannot be restored.

**Figure 7-1** Lifecycle of a pay-per-use DB instance




NOTE

- During the retention period, you cannot access or use your DB instance but the data stored in it can be retained. The retention period for the Huawei Cloud International website is 15 days.
- During the grace period, you can access and use only some resources of your DB instance. The grace period for the Huawei Cloud International website is 15 days.

## Avoiding and Handling Arrears

Make sure you have a valid payment method configured as soon as possible after your account is in arrears. For details, see **Topping Up an Account**.

If a DB instance is no longer used, you can delete it to avoid generating further expenditures.

To help make sure your account never falls into arrears, you can configure the **Balance Alert** on the **Overview** page of the Billing Center. Then, any time an expenditure quota drops to below the threshold you specify, Huawei Cloud automatically notifies you by SMS or email.

# 8 Billing Termination

## Yearly/Monthly Resources

When you purchase a yearly/monthly resource, such as a yearly/monthly DB instance, you make a one-time up-front payment. By default, the billing automatically stops when the purchased subscription expires.

- If you no longer need a resource, but the subscription has not yet expired, you can unsubscribe from it. Depending on what coupons were used for the purchase, Huawei Cloud may issue you a refund. For details about unsubscription rules, see **Unsubscriptions**.
- If you have enabled auto-renewal but no longer wish to automatically renew the subscription, disable it before the auto-renewal date (7 days before the expiration date by default) to avoid unexpected expenditures.

## Pay-per-Use Resources

If pay-per-use resources, such as pay-per-use DB instances, are no longer required, delete them in a timely manner.

## Searching for Resources from Bills and Stopping Billing

To ensure that all related resources are deleted, you can search the billing records by resource name, and then delete the resources you identify in this way.

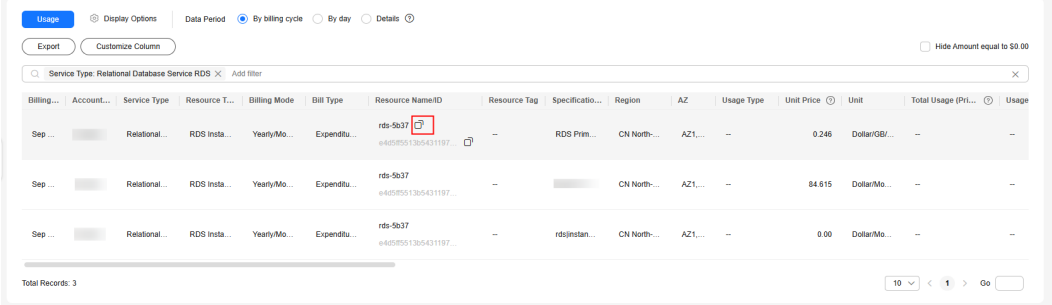
**Step 1** **Log in to the management console**.

**Step 2** On the top menu bar, choose **Billing** > **Bills**.

**Step 3** On the **Expenditure Details** page of the Billing Center, click the icon shown in the following figure to copy the resource name.

**Figure 8-1** Copying the resource name




**Step 4** Click ☰ in the upper left corner of the page and choose **Databases** > **Relational Database Service**.

**Step 5** Enter the copied resource name in the search box to search for the resource.

**Step 6** Choose **More** > **Stop** in the **Operation** column to stop the DB instance. You can temporarily stop pay-per-use DB instances to save money.

After a DB instance is stopped, the VM where the DB instance is located is no longer billed. Other resources, including EIPs, storage resources, and backups, are still billed. For more information, see **Stopping an Instance**.

**Step 7** To delete the DB instance, choose **More** > **Delete** in the **Operation** column. Ensure that the DB instance has been removed from the list.

NOTE

You are billed one hour after the resource usage is calculated, so a bill may still be generated after the pay-per-use resource is deleted. For example, if you delete a DB instance (which is billed on an hourly basis) at 08:30, the expenditures for that hour from 08:00 to 09:00 are usually not billed until about 10:00.

**----End**

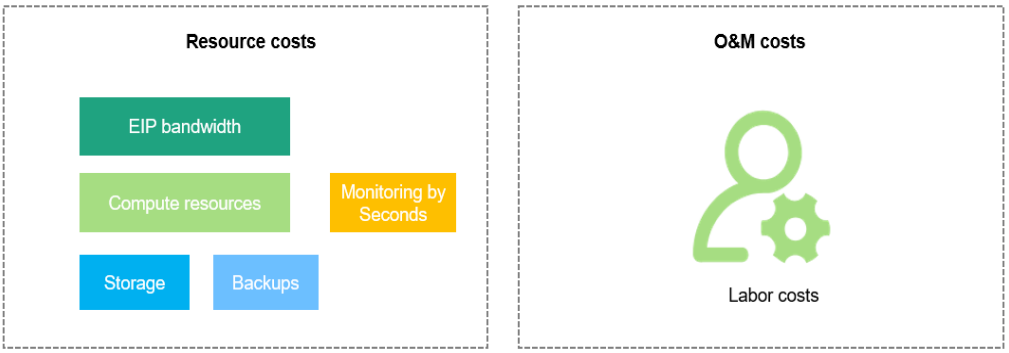
# 9 Cost Management

The following describes how to manage costs in terms of cost composition, allocation, analysis, and optimization. Optimizing costs can help you maximize return on investment.

## Cost Composition

RDS costs consist of two parts:

- Resource costs: cost of compute and storage resources. For details, see **Billing Modes**.
- O&M costs: labor costs incurred during the use of DB instances.




Huawei Cloud **Cost Center** helps you manage resource costs with ease. However, you need to identify, manage, and optimize O&M costs by yourself.

## Cost Allocation

A good cost accountability system is a prerequisite for cost management. It ensures that departments, business teams, and owners are accountable for their respective cloud costs. An enterprise can allocate cloud costs to different teams or projects so as to have a clear picture of their respective costs.

Huawei Cloud **Cost Center** provides various tools for you to group costs in different ways. You can experiment with these tools and find a way that works best for you.

- **By linked account**

  The enterprise master account can manage costs by grouping the costs of its member accounts by linked account. For details, see **Viewing Costs by Linked Account**.

- **By enterprise project**

  Before allocating costs, enable Enterprise Project Management Service (EPS) and plan your enterprise projects based on your organizational structure or service needs. When purchasing cloud resources, select an enterprise project so that the costs of the resources will be allocated to the selected enterprise project. For details, see **Viewing Costs by Enterprise Project**.

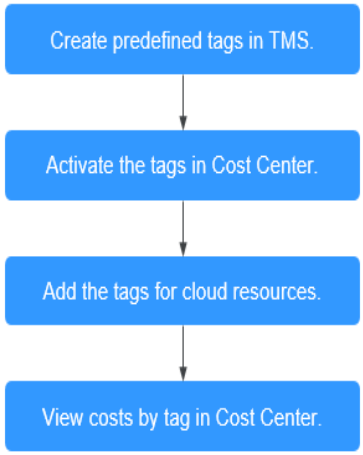
  **Figure 9-1** Selecting an enterprise project

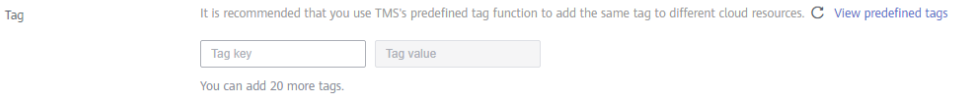
  
  

- **By cost tag**

  You use tags to sort your Huawei Cloud resources in a variety of different ways, for example, by purpose, owner, or environment. The following is the process of managing costs by predefined tags (recommended).

  **Figure 9-2** Adding tags

  For details, see **Viewing Costs by Cost Tag**.

- **By cost category**

  You can use cost categories provided by **Cost Center** to split shared costs. Shared costs are the costs of resources (compute, network, storage, or resource packages) shared across multiple departments or the costs that cannot be directly split by cost tag or enterprise project. These costs are not directly attributable to a singular owner, and they cannot be categorized into a singular cost type. In this case, you can define cost splitting rules to fairly

allocate these costs among teams or business units. For details, see **Allocating Costs By Cost Category**.

## Cost Analysis

To precisely control and optimize your costs, you need a clear understanding of what parts of your enterprise incurred different costs. **Cost Center** visualizes your original costs and amortized costs using various dimensions and display filters for cost analysis so that you can analyze the trends and drivers of your service usage and costs from a variety of perspectives or within different defined scopes.

You can also use cost anomaly detection provided by **Cost Center** to detect unexpected expenses in a timely manner. In this way, costs can be monitored, analyzed, and traced.

For details, see **Making Cost Analysis to Explore Costs and Usage** and **Enabling Cost Anomaly Detection to Identify Anomalies**.

## Cost Optimization

- **Cost control**

  You can create different types of budgets on the **Budgets** page of Cost Center to track your costs against the budgeted amount you specified. If the budget thresholds you defined are reached, Cost Center will send alerts to the recipients you configured. You can also create budget reports and specify recipients to receive budget alerts if any at a frequency you configured.

  Suppose you want to create a monthly budget of $2,000 USD for pay-per-use DB instances and expect to receive an alert if the forecasted amount exceeds 80% of the budgeted amount. You can refer to the following budget information.

**Figure 9-3** Basic budget information

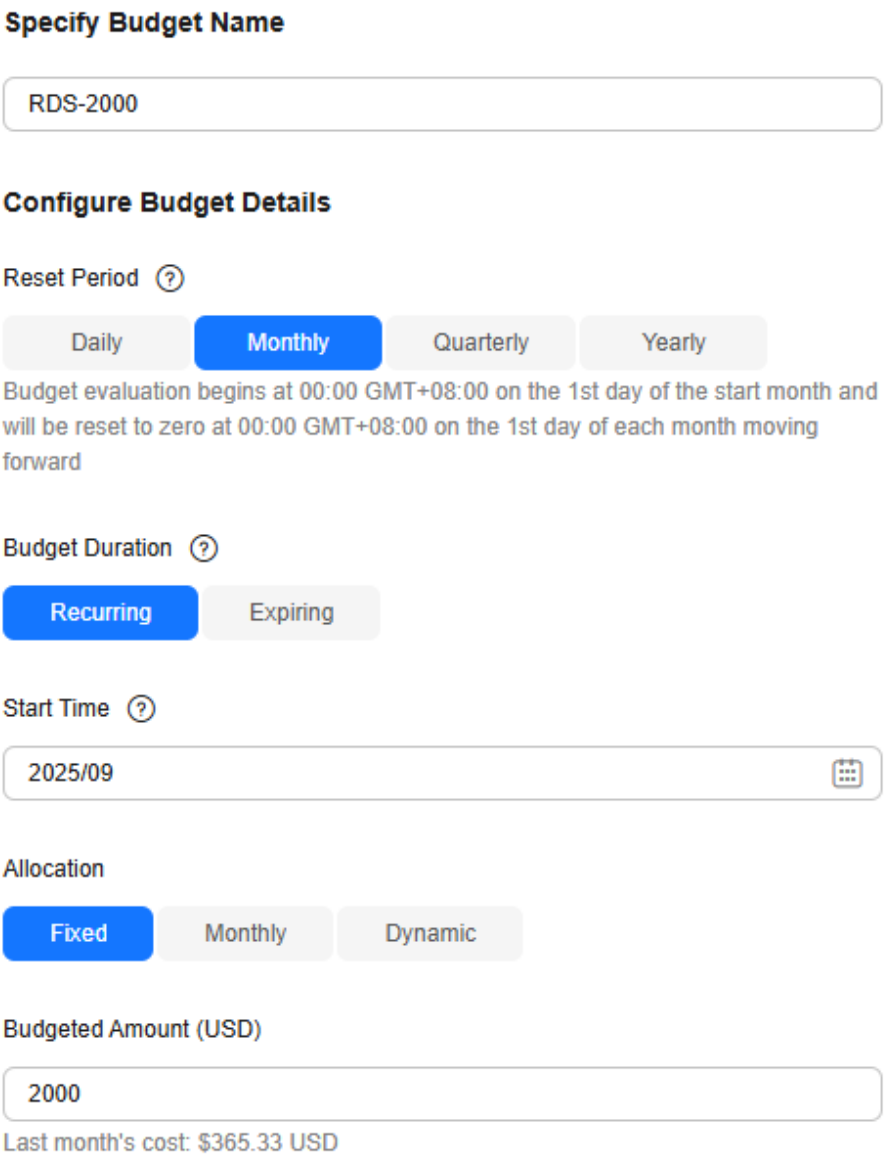


**Figure 9-4** Defining the budget scope

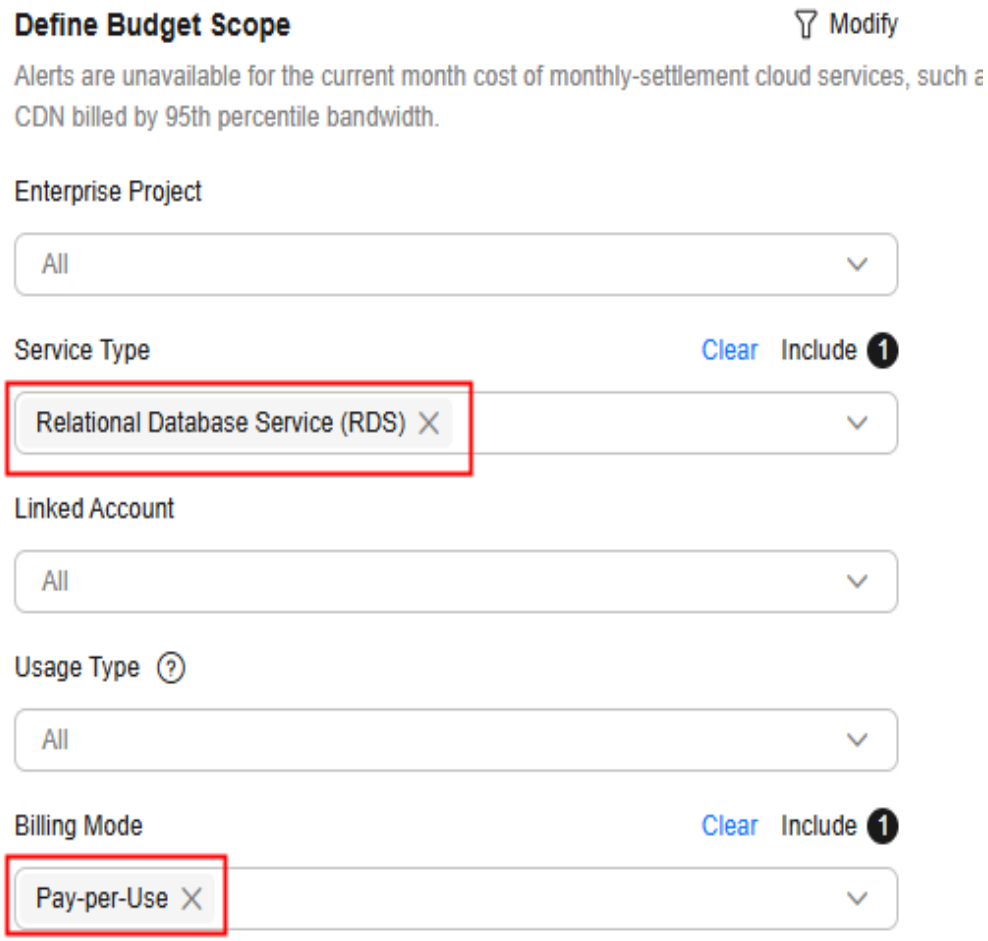
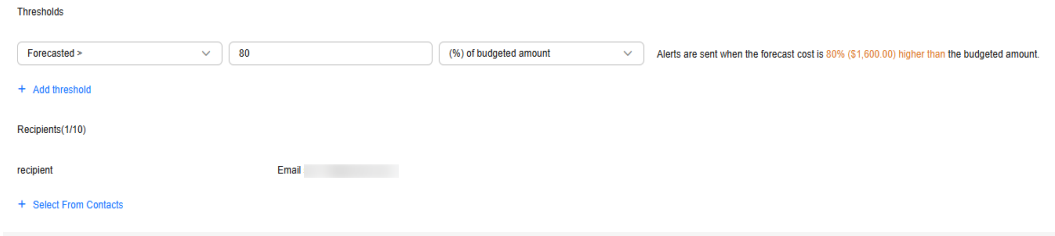



**Figure 9-5** Setting a budget alert




For details, see **Creating Forecasts and Budgets to Track Costs and Usage**.

- **Resource rightsizing**

  **Cost Center** analyzes your historical CPU and other resource usage to identify idle DB instance resources and generate resource rightsizing recommendations. These rightsizing opportunities are places where you can reduce costs. You can also identify resources with high costs based on the analyses on the **Cost Analysis** page and use Cloud Eye to monitor resource usage. By doing this, you can determine the causes of high costs and take optimization measures accordingly. You can:

  - Monitor resource usage and evaluate whether the current configuration is more than you need, for example, you can monitor the usage of CPUs, memory, and storage.
  - Identify idle resources and delete idle DB instances in a timely manner.

- **Billing mode selection**

  Different types of services have different requirements on resource usage periods, so the most economical billing mode for one resource may not be the best option for another resource.

  - For mature services that tend to be stable for the long term, select yearly/monthly billing.
  - For short-term, unpredictable services that experience traffic bursts and cannot afford to be interrupted, select pay-per-use billing.
  - Monitor the lifecycle of DB instances and renew yearly/monthly instances that are about to expire in a timely manner.