Distributed Message Service for RabbitMQ

Billing

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Contents

1 Billing Overview of DMS for RabbitMQ

In this document, you will learn about the billing modes, billing items, renewal, and arrear of Distributed Message Service (DMS) for RabbitMQ.

- **Billing Modes**

  DMS for RabbitMQ has two billing modes: yearly/monthly and pay-per-use. Yearly/Monthly is a prepaid mode. You need to pay first, and will be billed based on the required duration in your order. Ensure that your account balance is sufficient. Pay-per-use is a postpaid mode. You can use the service first, and will be billed for your usage duration. For details, see **Billing Modes of DMS for RabbitMQ**.

  After purchasing a RabbitMQ instance, you can change your billing mode to meet changing needs. For details, see **Overview**.

- **Billing Items**

  Fees of DMS for RabbitMQ consist of instance fees and storage space fees. For details about the calculation factors and formula of each billing item, see **Billing Items**.

  For more information about the billing samples in different scenarios and the billing process for each billing item in different billing modes, see **Billing Examples**.

- **Renewal**

  Yearly/Monthly RabbitMQ instances cannot run after their subscription expires. To continue using your RabbitMQ instance, renew it before it expires. Otherwise, the instance and disk storage space will be automatically released, and your data may be lost. You can renew your subscription manually or automatically. For details, see **Overview**.

- **Bills**

  To learn about your expenditures, go to **Billing Center** > **Billing**, and view the transactions and billing details related to your RabbitMQ instances. For details, see **Bills**.

- **Arrears**

  Your account goes into arrears when the balance is less than the bill to be settled. To continue using your cloud services, top up your account in time. For details, see **Arrears**.

- **Stopping Billing**

To avoid unexpected bills, you can unsubscribe from or delete your cloud services if they are no longer needed. For details, see **Stopping Billing**.

- **Cost Management**

  You can manage your costs from 4 dimensions: composition, allocation, analysis, and optimization. For details, see **Cost Management**.

Pricing

Learn about **Distributed Message Service for RabbitMQ Pricing Details**.

2 Billing Modes

2.1 Billing Modes of DMS for RabbitMQ

DMS for RabbitMQ has two billing modes: yearly/monthly and pay-per-use. Learn more about **Distributed Message Service for RabbitMQ Pricing Details**.

- Yearly/Monthly is a prepaid mode. You need to pay first, and will be billed for your subscription period. The longer the subscription, the bigger the discount. This mode is recommended for mature services that feature long-term stable requirements.
- Pay-per-use is a postpaid mode. You can pay after using the service, and will be billed for your usage duration. The fees are calculated in seconds and settled by hour. This mode allows you to adjust resource usage easily. You do not need to prepare resources in advance, and will not have excessive or insufficient preset resources. This mode is recommended for scenarios such as e-commerce flash sales which feature sudden traffic bursts.

Table 2-1 compares the two billing modes.

Table 2-1 Billing modes

Billing Mode	Yearly/Monthly	Pay-per-use
Payment	Prepaid Billed by the required duration specified in your order	Postpaid Based on the usage duration of your RabbitMQ instance.
Billing period	Billed by the required duration specified in your order	Calculated in seconds, settled by hour.
Billing items	Instance and storage space	Instance and storage space
Billing mode change	Can be changed to pay-per-use. The change takes effect only after the yearly/monthly subscription expires.	Can be changed to yearly/monthly.

Specification change	Supported	Supported
Whether instances in Recycle Bin are billed	Yearly/Monthly instances with recycling policies enabled will be moved to Recycle Bin upon unsubscription. After that, they will not generate fees, but their storage will. Yearly/Monthly instances will be changed to pay-per-use ones upon successful recovery.	Pay-per-use instances with recycling policies enabled will be moved to Recycle Bin upon deletion. After that, they will not generate fees, but their storage will.
Scenario	Recommended for long-term use. Suitable and price-friendly for scenarios where the resource usage duration can be estimated.	Recommended if you want more flexibility. Suitable for scenarios where resource demands fluctuate.

2.2 Yearly/Monthly

In the yearly/monthly billing mode, you pay before using resources. It is suitable if you need stable resources and want lower costs. By selecting the yearly/monthly mode, you can pre-purchase cloud service resources and gain certain price discounts. This section describes the billing rules for yearly/monthly RabbitMQ instances.

Scenario

In yearly/monthly mode, you need to first pay for a certain duration. This mode is suitable for services with the following characteristics:

- Stable services: enterprises' official websites, online malls, blogs, and others. Yearly/Monthly billing provides higher cost efficiency.

- Long-term projects: scientific research projects, large-scale events, and others. Yearly/Monthly billing facilitates stable supply of resources throughout the project.

- Service peak estimation: e-commerce promotion season, festivals, holidays, and others. Resources insufficiency can be avoided by pre-purchasing resources for peak demands.

- High data security: For services that require high data security, yearly/monthly billing facilitates continuous usage of the resources.

Billing Items

DMS for RabbitMQ charges you for your RabbitMQ instance and disk storage space. They support yearly/monthly billing.

Table 2-2 Billing items

Billing Item	Description
Instance	Broker flavor and quantity.
Storage space	Total storage space fees (Single broker's storage space × Broker quantity). The storage space of a yearly/monthly RabbitMQ instance is also billed in the yearly/monthly mode.

Assume that you plan to purchase a RabbitMQ instance with 300 GB storage space. At the bottom of the **Buying a RabbitMQ Instance** page, you can view price details, as shown **Figure 2-1**.

Figure 2-1 Example price

The price includes:

● Instance fee: Calculated based on the selected broker flavor and quantity.
● Storage space fee: Calculated based on the selected disk type and total disk storage space (Single broker's storage space × Broker quantity).

Billing Period

The billing period of yearly/monthly RabbitMQ instance is determined by purchase duration (UTC+8). The billing period starts from the time you activate or renew your subscription (precise to seconds), and ends at 23:59:59 on the expiration date.

For example, if you purchased a RabbitMQ instance for one month on Mar 08, 2023, 15:50:04, the billing period is from Mar 08, 2023, 15:50:04 to Apr 08, 2023, 23:59:59.

Billing Samples

Assume that you purchased a yearly/monthly RabbitMQ instance (rabbitmq.2u4g.cluster × 3, ultra-high I/O 300 GB total storage space) in AP-Singapore on Mar 08, 2023, 15:50:04. The billing items include the instance (broker flavor and quantity) and storage space (ultra-high I/O 300 GB). Assume the subscription is for one month, and will be manually renewed for one month before it expires:

- The first billing period: Mar 08, 2023, 15:50:04–Apr 08, 2023, 23:59:59
- The second billing period: Apr 08, 2023, 23:59:59–May 08, 2023, 23:59:59

You need to pay for each billing period first, and RabbitMQ instance resources are charged individually. The billing formula is shown in **Table 2-3**.

Table 2-3 Billing formulas

Resource Type	Billing Formula	Resource Unit Price
Instance	Instance specification unit price x Purchase duration	For instance prices, see **Product Pricing Details**.
Storage space	Storage space unit price × Purchase period	For storage prices, see **Product Pricing Details**.

Figure 2-2 shows the billing calculation. The prices in the following two pictures are for reference only. Actual prices are subject to **Product Pricing Details**.

Figure 2-2 Sample fees calculation of a yearly/monthly RabbitMQ instance (AP-Singapore)
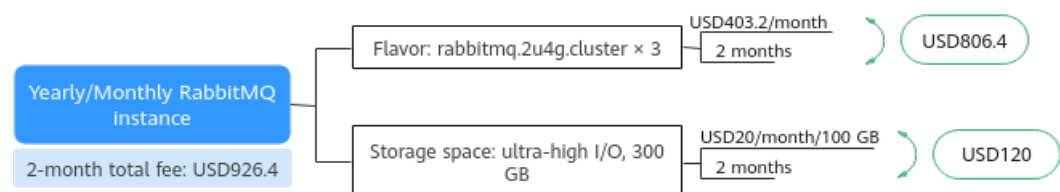
Impact on Billing After Specification Change

If the current resource specifications of your yearly/monthly RabbitMQ instance no longer meet your needs, you can change the specifications on the RabbitMQ instance console. The system calculates billing change according to the following rules:

- Specification upgrade: You need to pay the price difference.
- Specification downgrade: Huawei Cloud will refund you the price difference.

Take a specification upgrade without discounts as an example. Assume that you purchased a yearly/monthly RabbitMQ instance (rabbitmq.2u4g.cluster × 3) for one month in AP-Singapore on Apr 08, 2023, and you plan to change the specification to rabbitmq.4u8g.cluster × 3 on Apr 18, 2023. The price for the old specification is USD403.2/month, and the new one is USD806.4/month. The formula is as follows:

Specification upgrade fee = New specification price × Remaining period - Old specification price × Remaining period

The remaining period in the formula is the remaining days of each calendar month divided by the maximum days of corresponding calendar month. In this

sample, the remaining period = 12/30 (the remaining days of April/the maximum days of April) + 8/31 (the remaining days of May/the maximum days of May) = 0.6581. Then, the upgrade fees = 806.4 × 0.6581 – 403.2 × 0.6581 = USD265.35.

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

Impact of Expiration

Figure 2-3 describes the status of each stage of a yearly/monthly RabbitMQ instance. After purchase, the RabbitMQ instance runs properly within the billing period, and this period is the validity period. When the RabbitMQ instance expires and you do not renew it, it goes into the grace period and then the retention period.

Figure 2-3 Life cycle of a yearly/monthly RabbitMQ instance
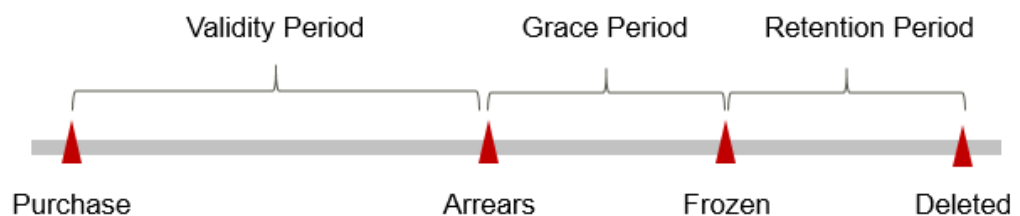
Expiration Reminder

From the 7th day before a yearly/monthly RabbitMQ instance expires, the system will send an expiration reminder to the creator of Huawei Cloud account by email, SMS, and internal message.

Impact of Expiration

- Grace period

  If your yearly/monthly RabbitMQ instance expires and you do not renew it, it goes into the grace period and its status turns to **Expired**. Within the grace period, you can access your RabbitMQ instance, but the following operations will be restricted:

  – Changing instance specifications

  – Yearly/Monthly RabbitMQ instances will be deleted permanently upon unsubscription.

- Retention period

  If you do not renew your yearly/monthly RabbitMQ instance before the grace period ends, it goes into the retention period and its status turns to **Frozen**. You cannot perform any operations on your yearly/monthly RabbitMQ instance in the retention period.

- Permanent release

  Renew yearly/monthly RabbitMQ instances within the retention period. Otherwise, they will be released and their data cannot be restored. Instances will be deleted permanently upon release.

 NOTE

- For details about the grace period and the retention period, see **What Is a Grace Period of Huawei Cloud? How Long Is It?** and **What Is a Retention Period of Huawei Cloud? How Long Is It?**
- For details about renewals, see **Overview**.

Recycle Bin Charging

Yearly/Monthly instances with recycling policies enabled will be moved to Recycle Bin upon unsubscription. After that, they will not generate fees, but their storage will.

Yearly/Monthly instances will be changed to pay-per-use ones upon successful recovery.

2.3 Pay-per-Use

Pay-per-use is a billing mode in which you pay after using the service. This mode is recommended if you do not need any prepayment or long-term commitment. This section describes the billing rules for pay-per-use RabbitMQ instances.

Scenario

Pay-per-use is applicable to short-term, abrupt, or unpredictable services that cannot be interrupted, such as e-commerce flash sales, temporary testing, and scientific computing.

Billing Items

DMS for RabbitMQ charges you for your RabbitMQ instance and disk storage space. They support pay-per-use billing.

Table 2-4 Billing items

Billing Item	Description
Instance	Broker flavor and quantity
Storage space	Total storage space fees (Single broker's storage space × Broker quantity)

Assume that you plan to purchase a RabbitMQ instance with 300 GB storage space. At the bottom of the **Buying a RabbitMQ Instance** page, you can view price details, as shown **Figure 2-4**.

Figure 2-4 Example price

Billed Resource	Amount
Instance Price	$0.84 USD/hour
Data Disk Price	$0.03 USD/hour

Price: **$0.87 USD** /hour

The price includes:

- Instance fee: Calculated based on the selected broker flavor and quantity.
- Storage space fee: Calculated based on the selected disk type and total disk storage space (Single broker's storage space × Broker quantity).

Billing Period

A pay-per-use RabbitMQ instance is billed in seconds, and settled on the hour (UTC+8). Once settlement is complete, it enters a new billing period. The billing starts from the time when the RabbitMQ instance is successfully created and ends at the time when the instance is deleted.

For example, if you purchase a pay-per-use RabbitMQ instance at 8:45:30, and delete it at 8:55:00, the billing period is from 8:00:00 to 9:00:00. Fees are generated from 8:45:30 to 8:55:30, and the billing duration is 600 seconds.

Billing Samples

Assume that you purchased a pay-per-use RabbitMQ instance (rabbitmq.2u4g.cluster × 3, high I/O 300 GB total storage space) in AP-Singapore on Apr 18, 2023, 9:59:30. The billing items include the instance (broker flavor and quantity) and storage space (high I/O 300 GB). Then, you delete it on Apr 18, 2023, 10:45:46:

- The first billing period is from 9:00:00 to 10:00:00. Fees are generated from 9:59:30 to 10:00:00. The billing duration is 30 seconds within the period.
- The second billing period is from 10:00:00 to 11:00:00. Fees are generated from 10:00:00 to 10:45:46. The billing duration is 2746 seconds within the period.

You need to pay for each billing period, and RabbitMQ instance resources are charged individually. The billing formula is shown in **Table 2-5**. The price of a resource listed in the product pricing details is the hourly price. Divide it by 3600 to obtain the price for each second.

Table 2-5 Billing formulas

Resource Type	Billing Formula	Resource Unit Price
Instance	Instance specification unit price x Purchase duration	For instance prices, see **Product Pricing Details**.
Storage space	Storage space unit price × Purchase period	For storage prices, see **Product Pricing Details**.

Figure 2-5 shows the billing calculation. The prices in the following two pictures are for reference only. Actual prices are subject to **Product Pricing Details**.

Figure 2-5 Sample fees calculation of a pay-per-use RabbitMQ instance (AP-Singapore)
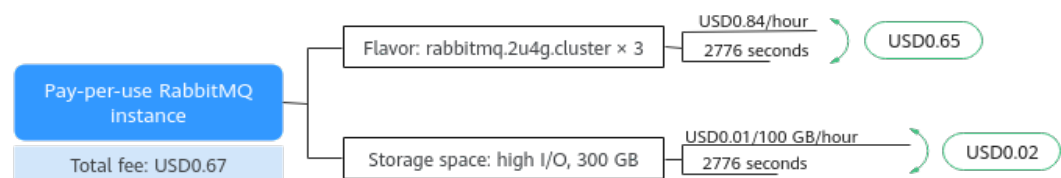
Impact on Billing After Specification Change

If you change instance specifications after purchasing a pay-per-use instance, a new order will be generated based on the new specification's price. The old order automatically becomes invalid.

If you change instance specifications within one hour, multiple billing records will be generated. The start time and end time of each billing record correspond to when different specification comes to effect within the hour.

For example, assume that you purchase a pay-per-use instance (rabbitmq.2u4g.cluster x 3) at 9:00:00. You upgrade the instance flavor to rabbitmq.4u8g.cluster x 3 at 9:30:00. Then, two billing records are generated from 9:00:00 to 10:00:00.

● The first billing record corresponds to 9:00:00–9:30:00, based on the price for rabbitmq.2u4g.cluster x 3.

● The second billing record corresponds to 9:30:00–10:00:00, based on the price for rabbitmq.4u8g.cluster x 3.

Arrears Impact

Figure 2-6 describes the status of each stage of a pay-per-use RabbitMQ instance. After you purchase a RabbitMQ instance, the instance is running properly within the billing period, this period is the valid period; when the automatic billing of a pay-per-use RabbitMQ instance leads to arrears on your account, the account status turns to arrears, and your RabbitMQ instance enters the grace period and retention period accordingly.

Figure 2-6 Life cycle of a pay-per-use RabbitMQ instance
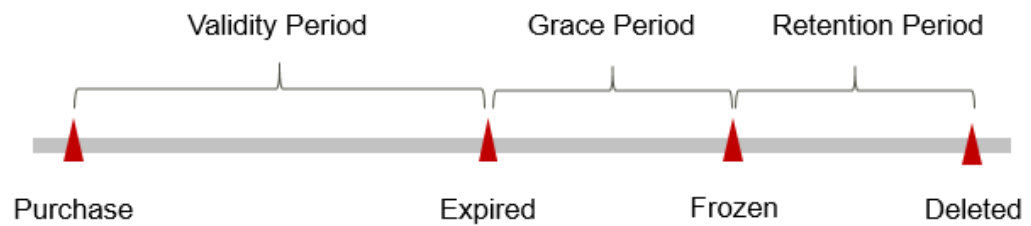
Arrears Alert

The system will deduct fees for pay-per-use resources upon the end of each billing cycle. When your account is in arrears, we will notify the Huawei Cloud account creator by email, SMS, and internal message.

Arrears Impact

- Grace period

  When your account is in arrears due to automatic fee deduction for pay-per-use RabbitMQ instances, the account status turns to arrears. In arrears, the pay-per-use resource continues rendering service but the resource enters the grace period. You need to pay the fees of your pay-per-use resource incurred during the grace period. To view the fees, go to the **Billing Center** > **Overview** page. Huawei Cloud will deduct the fees after you top up your account. Pay-per-use RabbitMQ instances in the grace period cannot be restored upon deletion.

- Retention period

  If you do not pay the arrears within the grace period, the resource enters the retention period and its status turns to **Frozen**. You cannot perform any operations on pay-per-use resources in the retention period.

- Permanent release

  If you do not pay the arrears within the retention period, your RabbitMQ instance will be released, and data will be lost. Instances will be deleted permanently upon release.

  📖 **NOTE**

  - For details about the grace period and the retention period, see **What Is a Grace Period of Huawei Cloud? How Long Is It?** and **What Is a Retention Period of Huawei Cloud? How Long Is It?**

  - For details about topping up your account, see **Making Repayments (Postpaid Direct Customers)**.

Recycle Bin Charging

Pay-per-use instances with recycling policies enabled will be moved to Recycle Bin upon deletion. After that, they will not generate fees, but their storage will.

3 Billing Items

Description

Fees of DMS for RabbitMQ consist of instance fees and storage space fees. For details, see **Table 3-1**.

Learn about **Distributed Message Service for RabbitMQ Pricing Details**.

Table 3-1 Billing items of DMS for RabbitMQ

Billing Item	Description	Billing Mode	Billing Formula
Instance	Billing factors: broker specifications and quantity **NOTE** To check this billing item, see **dms instance platinume** in the bill, as shown in **Figure 3-1**.	Yearly/Monthly and pay-per-use	**Instance specification unit price x Purchase duration** For the instance specification unit price, see **Product Pricing Details**.
Storage space	Billing factors: EVS disk type and capacity **NOTE** To check this billing item, see **dms physical storage** in the bill, as shown in **Figure 3-1**.	Yearly/Monthly and pay-per-use	**EVS disk unit price x Purchase duration** For the EVS unit price, see **Product Pricing Details**.

Figure 3-1 Bill

| Billing...	Enterpr...	Accou... ⑦	Service Type	Resource Type	Billing Mode
Jan ...	default	hwstaff_pu...	Distributed Message Service DMS	dms instance platinume	Pay-per-Use
Jan ...	default	hwstaff_pu...	Distributed Message Service DMS	dms physical storage	Pay-per-Use

Billing Samples

Take the yearly/monthly mode as an example. Assume that you purchased a yearly/monthly RabbitMQ instance (rabbitmq.2u4g.cluster × 3, ultra-high I/O 300 GB total storage space) in AP-Singapore on Mar 08, 2023, 15:50:04. The billing items include the instance (broker flavor and quantity) and storage space (ultra-high I/O 300 GB). Assume the subscription is for one month, and will be manually renewed for one month before it expires:

- The first billing period: Mar 08, 2023, 15:50:04–Apr 08, 2023, 23:59:59
- The second billing period: Apr 08, 2023, 23:59:59–May 08, 2023, 23:59:59

Figure 3-2 shows the billing calculation. The prices in the following two pictures are for reference only. Actual prices are subject to **Product Pricing Details**.

Figure 3-2 Sample fees calculation of a yearly/monthly RabbitMQ instance (AP-Singapore)
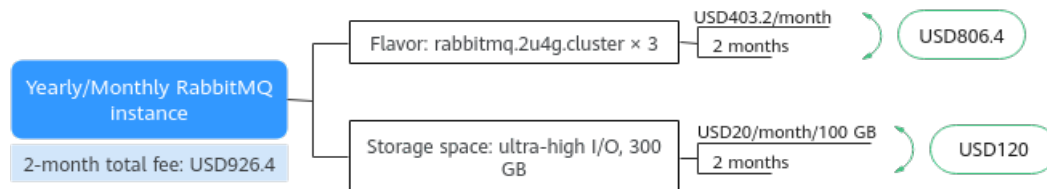
For billing samples of each billing item in pay-per-use mode, see **Billing Samples**.

4 Billing Examples

Scenario

A user purchased a pay-per-use RabbitMQ instance in AP-Singapore on Mar 18, 2023, 15:30:00:

- Flavor: rabbitmq.2u4g.cluster × 3
- Total storage space: high I/O, 300 GB

After a period of time, the user finds the current RabbitMQ instance no longer meets service requirements. The flavor is upgraded to rabbitmq.4u8g.cluster x 3 on Mar 20, 2023, 9:00:00. Since the RabbitMQ instance is intended for long-term use, the billing mode is switched to yearly/monthly on Mar 20, 2023, 10:30:00, and the billing period is for one month. How much is the total fee of the RabbitMQ instance in March and April?

Billing Analysis

The usage of the RabbitMQ instance can be divided into two phases based on the billing mode: pay-per-use from Mar 18, 2023, 15:30:00 to Mar 20, 2023, 10:30:00, and yearly/monthly from Mar 20, 2023, 10:30:00 to Apr 20, 2023, 23:59:59.

Pay-per-Use

From Mar 18, 2023, 15:30:00 to Mar 20, 2023, 09:00:00, the billing is based on rabbitmq.2u4g.cluster x 3 for 41.5 hours. The fees are calculated as follows:
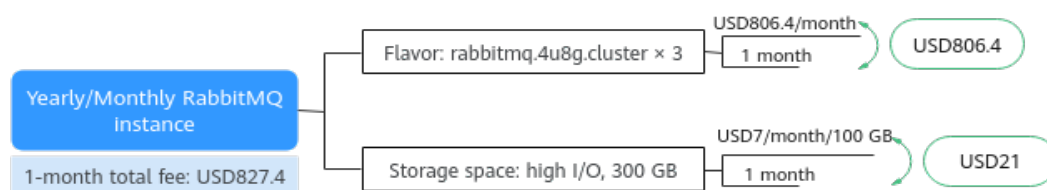

From Mar 20, 2023, 09:00:00 to Mar 20, 2023, 10:30:00, the billing is based on rabbitmq.4u8g.cluster × 3 for 1.5 hours. The fees are calculated as follows:
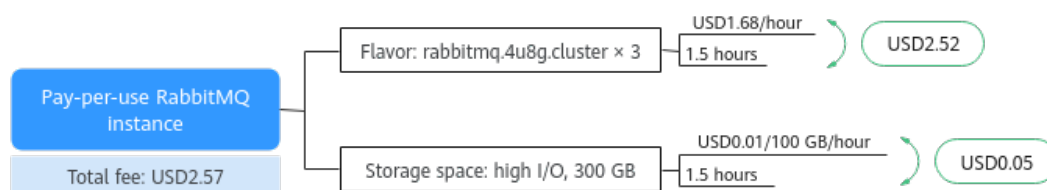
Yearly/Monthly

From Mar 20, 2023, 10:30:00 to Apr 20, 2023, 23:59:59, the billing mode is yearly/monthly, and the billing period is for one month. The fees are calculated as follows:

From March to April, the total fee generated by the RabbitMQ instance: 36.11 + 2.57 + 827.4 = USD866.08.

5 Billing Mode Changes

5.1 Overview

After purchasing a RabbitMQ instance, you can change your billing mode to meet changing needs. **Table 5-1** lists the billing items of RabbitMQ instances.

Table 5-1 Billing items of RabbitMQ instances

Billing Item	Description	Reference
Instance specifications	Changing the billing mode of a RabbitMQ instance will also change the billing mode of the instance specifications and storage space. ● Change the billing mode from pay-per-use to yearly/monthly to enjoy lower prices. ● By changing the billing mode from yearly/monthly to pay-per-use, you can reclaim some costs and use RabbitMQ resources more flexibly. **The pay-per-use mode takes effect only after a yearly/ monthly period expires.**	● **Pay-per-Use to Yearly/Monthly** ● **Yearly/Monthly to Pay-per-Use**
Storage space	The billing mode of storage space cannot be changed separately. It will be changed when the instance's billing mode is changed.	● **Pay-per-Use to Yearly/Monthly** ● **Yearly/Monthly to Pay-per-Use**

5.2 Pay-per-Use to Yearly/Monthly

If you want to use a pay-per-use RabbitMQ instance for a long time, you can change the billing mode to yearly/monthly to reduce costs. If you change the billing mode from pay-per-use to yearly/monthly, a new order is generated. The yearly/monthly resource takes effect immediately when you make the payment.

Assume that you bought a pay-per-use RabbitMQ instance on Apr 18, 2023, 15:29:16, and you changed the instance's billing mode to yearly/monthly on Apr 18, 2023, 16:30:30 (a change-to-yearly/monthly order generated). After you paid the order, the RabbitMQ instance immediately entered the yearly/monthly billing mode. On the **Billing Center** > **Bills** page, three bills are generated as follows:

- Pay-per-use: Apr 18, 2023, 15:00:00 to Apr 18, 2023, 16:00:00. Fees are generated for the period from 15:29:16 to 16:00:00.
- Pay-per-use: Apr 18, 2023, 16:00:00 to Apr 18, 2023, 17:00:00. Fees are generated for the period from 16:00:00 to 16:30:30.
- Yearly/Monthly: Apr 18, 2023, 16:30:30

Constraints

When a RabbitMQ instance's billing mode changes, the billing mode of the EVS disks bound to the instance also changes.

Prerequisites

- The billing mode of the RabbitMQ instance is pay-per-use.
- The RabbitMQ instance is in the **Running** state.

Procedure

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

Step 2 Click ☰ in the upper left and choose **Middleware** > **Distributed Message Service (for RabbitMQ)**.

Step 3 Use one of the following methods to change the billing mode from pay-per-use to yearly/monthly:

- Select one or more RabbitMQ instances and click **Change to Yearly/Monthly Billing** in the upper left corner of the instance list. In the displayed **Change to Yearly/Monthly** dialog box, click **Yes**.
- In the row that contains the target RabbitMQ instance, choose **More** > **Change to Yearly/Monthly Billing**.
- Click the desired RabbitMQ instance to view its details. Click **More** > **Change to Yearly/Monthly Billing** in the upper right corner to go to the **Change Subscription** page.

Step 4 Select the required usage duration, determine whether to enable **Auto-Renew**, confirm the expected expiration date and price, and click **Pay**.

Figure 5-1 From pay-per-use to yearly/monthly
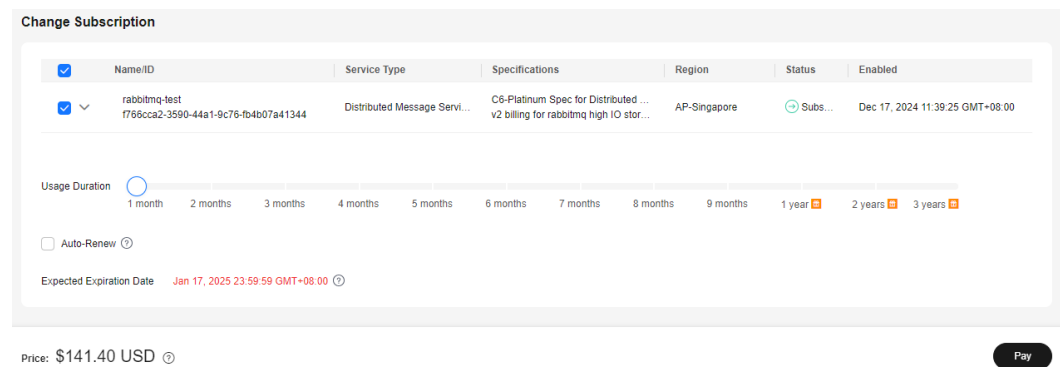
Step 5 Select a payment method and make your payment. Once the order is paid, the billing mode of the instance becomes yearly/monthly.

----End

5.3 Yearly/Monthly to Pay-per-Use

After creating a yearly/monthly RabbitMQ instance, you can change the billing mode to pay-per-use to reclaim some costs and use the instance more flexibly.

Notes and Constraints

The pay-per-use billing mode will take effect only after the yearly/monthly subscription has expired.

Prerequisites

- The billing mode of the RabbitMQ instance is **Yearly/Monthly**.
- The RabbitMQ instance is in the **Running** state.

Changing to Pay-per-Use on the Cloud Service Console

Step 1 Log in to the console.

Step 2 Click ☰ in the upper left and choose **Middleware** > **Distributed Message Service (for RabbitMQ)**.

Step 3 Set the billing mode to change to pay-per-use after the yearly/monthly subscription expires, in either of the following ways:

- Choose **More** > **Change Billing Upon Expiration** in the **Operation** column of the desired RabbitMQ instance.
- Select one or more RabbitMQ instances in the left and choose **Change Billing Upon Expiration**. In the displayed **Change Billing Upon Expiration** dialog box, click **Yes**.

Step 4 Confirm the change details, and click **Change to Pay-per-Use**.

----End

Changing to Pay-per-Use in Billing Center

**Step 1** Go to the **Billing > Renewal** page.

Step 2 Customize search criteria.

- Under the **Pay-per-Use After Expiration** tab, you can view the resources whose billing mode will change to pay-per-use upon expiration.

- For resources on the **Manual Renewals**, **Auto Renewals**, and **Renewals Canceled** pages, you can set the billing mode to change to pay-per-use upon expiration.

Step 3 Set the billing mode to change to pay-per-use after the yearly/monthly subscription expires.

- Single resource: Select the RabbitMQ instance for which you want to change the billing mode, and choose **More** > **Change to Pay-per-Use After Expiration** in the **Operation** column.

**Figure 5-2** Changing from yearly/monthly to pay-per-use for a single resource
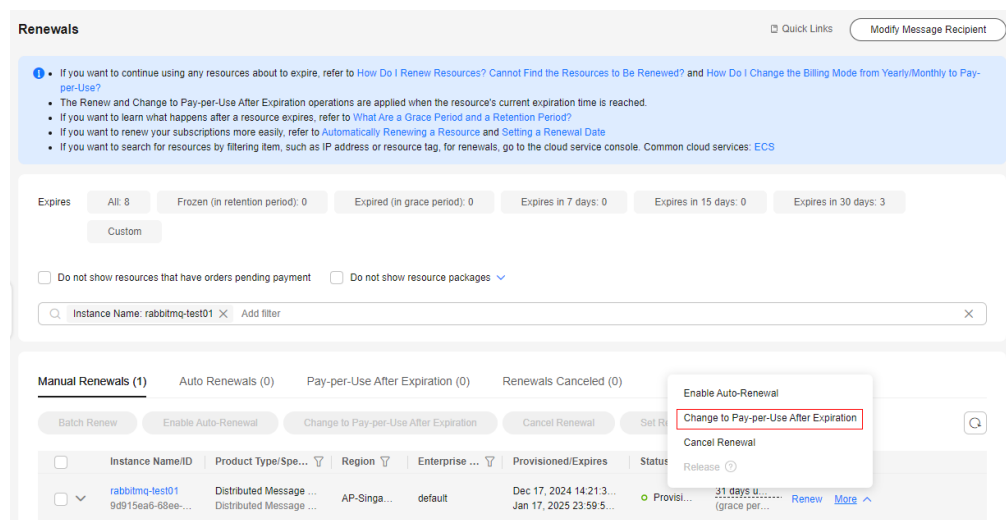
- Multiple resources: Select the RabbitMQ instances for which you want to change the billing mode, and click **Change to Pay-per-Use After Expiration** above the resource list.

Figure 5-3 Batch changing from yearly/monthly to pay-per-use for resources
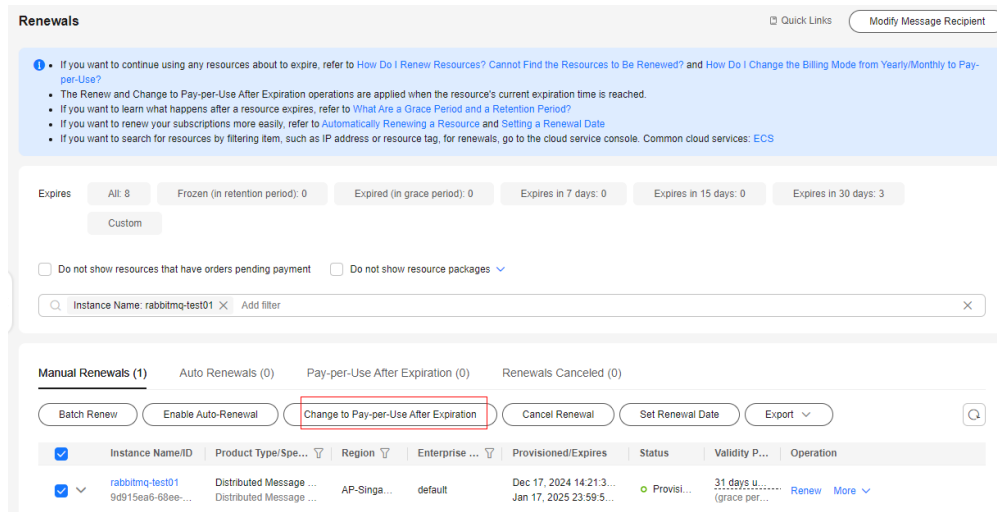
Step 4 Confirm the subscription change details, and click **Change to Pay-per-Use After Expiration**.

Figure 5-4 Changing to pay-per-use upon expiration
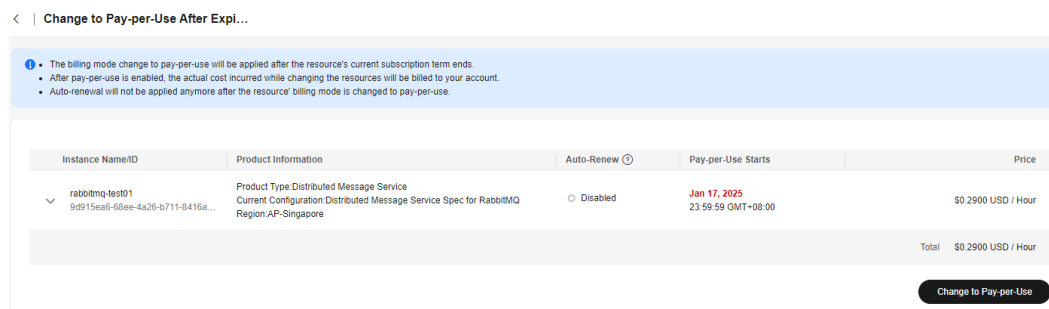
----End

6 Renewal

6.1 Overview

Description

Yearly/Monthly RabbitMQ instances cannot run after their subscription expires. To continue using them, renew your subscription within a specified period. Otherwise, your instance resources will be automatically released, and your data will be lost and cannot be restored.

Only yearly/monthly RabbitMQ instances can be renewed. Pay-per-use RabbitMQ instances can run as long as you have sufficient account balance.

If your subscription is renewed before it expires, all resources are retained and your RabbitMQ instance is not affected. For details about the statuses of a RabbitMQ instance after it expires, see **Impact of Expiration**.

Renewal Functions

Table 6-1 describes the functions related to the renewal of yearly/monthly RabbitMQ instances.

Table 6-1 Functions

Function	Description
Manual renewal	To use a yearly/monthly RabbitMQ instance longer, renew the subscription any time on the console as long as the instance is not automatically deleted.
Auto renewal	After auto-renewal is enabled, RabbitMQ instances are automatically renewed before the subscription expires. This prevents resources from being automatically deleted in the event that you forget to manually renew the subscription.

You can renew your subscription across the life cycle of your yearly/monthly RabbitMQ instance, as shown in **Figure 6-1**.

Figure 6-1 Life cycle of a RabbitMQ instance
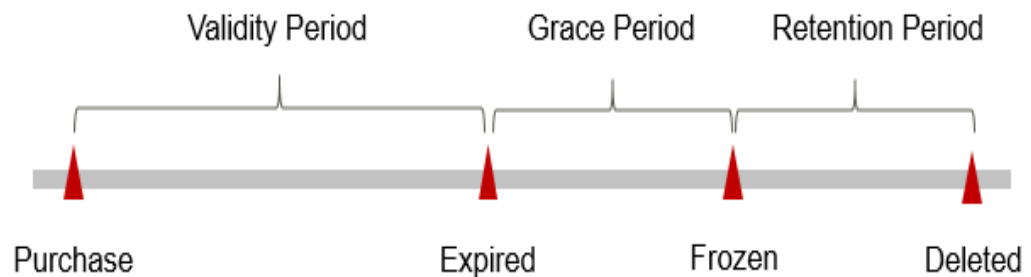
- A RabbitMQ instance is in the **Running** state from the time when it is purchased to the time when it expires.

- After the instance expires, its status changes to **Expired**.

- If the RabbitMQ instance is not renewed upon expiration, the instance enters the grace period. If the instance is not renewed after the grace period expires, the status changes to **Frozen**.

- If you do not renew your subscription after the grace period expires, your resource enters a retention period. If you do not renew the subscription within the retention period, your resource is automatically deleted.

☐ NOTE

For details about the grace period and the retention period, see **What Is a Grace Period of Huawei Cloud? How Long Is It?** and **What Is a Retention Period of Huawei Cloud? How Long Is It?**

Auto-renewal can be enabled any time before a RabbitMQ instance expires. The system attempts to automatically renew the instance at 03:00 seven days before the instance expires. If the fee deduction fails, there is one attempt at 03:00 every day until the instance expires or the renewal is successful. By default, fees are deducted seven days before your subscription expires. You can change this deduction date as required.

6.2 Manual Renewal

To use a yearly/monthly RabbitMQ instance longer, renew the subscription any time on the console as long as the instance is not automatically deleted.

Renewing a Subscription on the Cloud Service Console

Step 1 Log in to the console.

Step 2 Click ☰ in the upper left and choose **Middleware** > **Distributed Message Service (for RabbitMQ)**.

Step 3 Renew a RabbitMQ instance using one of the following methods:

- Select one or more RabbitMQ instances and click **Renew** in the upper left corner of the instance list. In the displayed **Renew** dialog box, click **Yes**.

- In the row that contains the target RabbitMQ instance, choose **More** > **Renew**.

- Click the desired RabbitMQ instance to view its details. Click **Renew** in the upper right corner to go to the **Renew** page.

Step 4 Select a renewal duration and determine whether to enable **Renewal Date** to renew on a standard renewal date. For details, see **Setting a Renewal Date**. Confirm the price and click **Pay**.

Figure 6-2 Confirming renewal
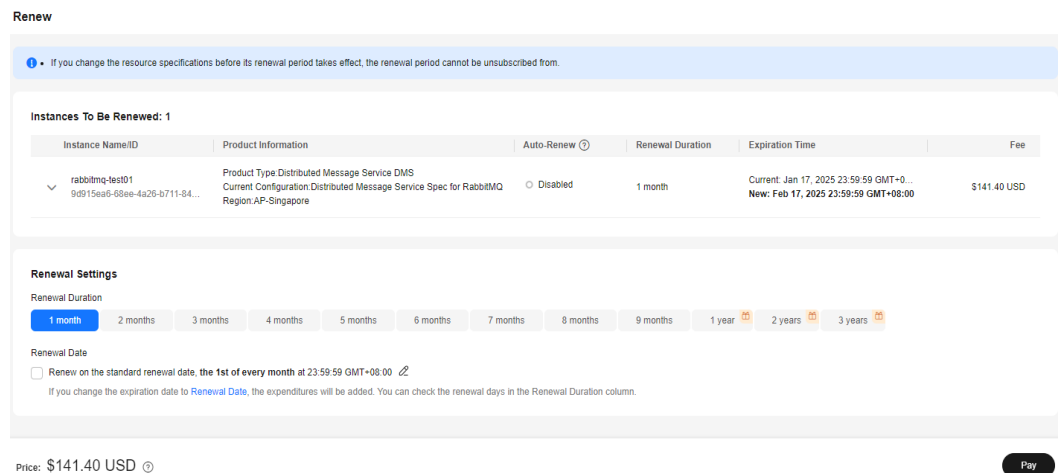
Step 5 Select a payment method and make your payment. Once the order is paid, the renewal is complete.

----End

Renewing a Subscription in Billing Center

Step 1 Go to the **Billing > Renewal** page.

**Step 2** Customize search criteria.

You can view all resources to be renewed on the **Manual Renewals**, **Auto Renewals**, **Pay-per-Use After Expiration**, and **Renewals Canceled** pages, and manually renew the resources.

All resources that need to be manually renewed can be placed on the **Manual Renewals** tab page. For details, see **Restoring to Manual Renewal**.
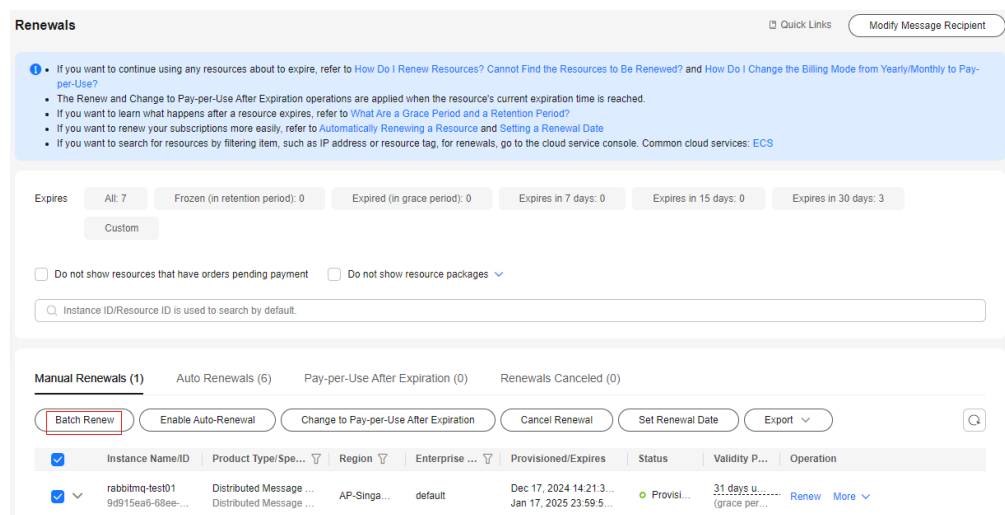
Step 3 Manually renew resources.

- Separate renewal: Click **Renew** in the **Operation** column for the desired resource.

Figure 6-3 Separate renewal
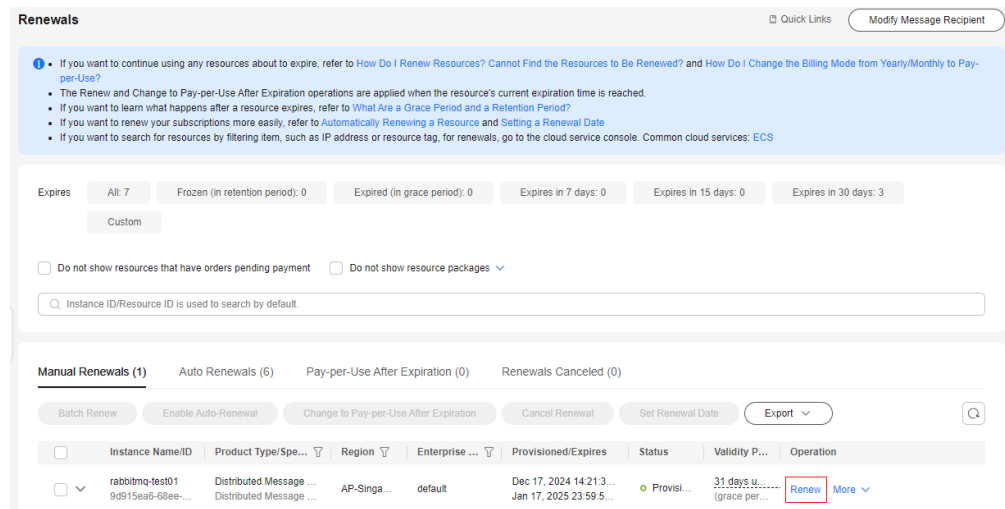
- Batch renewal: Check the boxes for the desired resources, and click **Batch Renew** in the upper left corner.

Figure 6-4 Batch renewal

Step 4 Select a renewal duration and determine whether to enable **Renewal Date** to renew on a standard renewal date. For details, see **Setting a Renewal Date**. Confirm the price and click **Pay**.

Figure 6-5 Confirming renewal
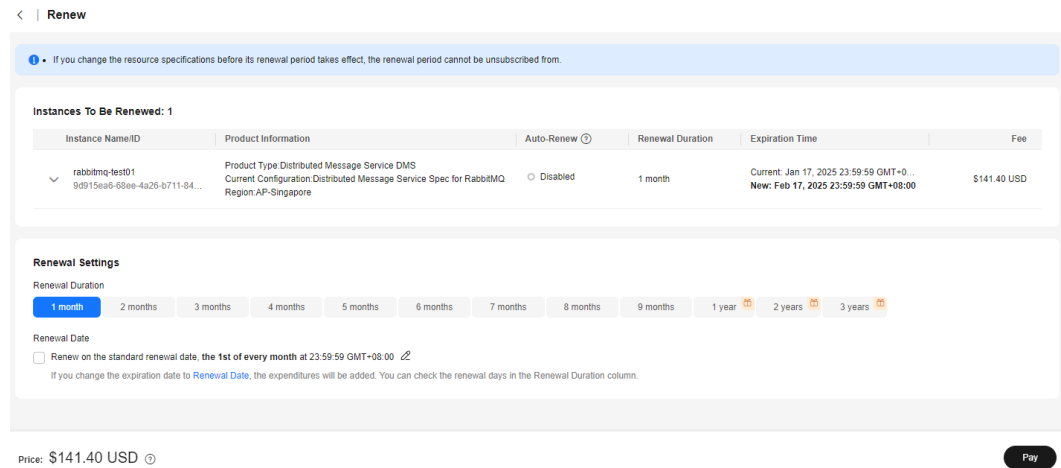
Step 5 Select a payment method and make your payment. Once the order is paid, the renewal is complete.
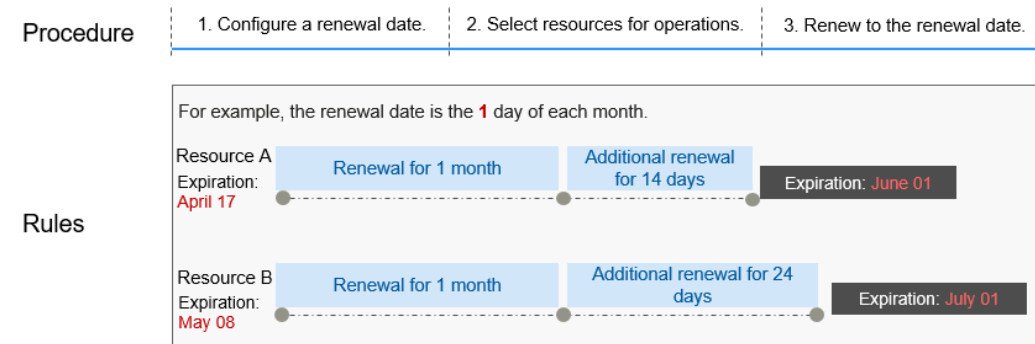
----End

Setting a Renewal Date

If you have multiple RabbitMQ instances with different expiration dates, you can set a fixed expiration date to facilitate routine management and renewal.

In **Figure 6-6**, a user renews two resources that will expire at different time for one month and sets a fixed renewal date.

Figure 6-6 Setting a fixed renewal date

For details, see **Setting a Renewal Date**.

6.3 Auto Renewal

Auto-renewal makes renewal easier and prevents RabbitMQ instances from being automatically deleted if you forget to manually renew them. The auto-renewal rules are as follows:

- The first auto-renewal date and billing cycle are calculated based on the expiration date of the RabbitMQ instance.

- The auto-renewal period of a RabbitMQ instance varies depending on how you enable auto-renewal.
- Auto-renewal can be enabled any time before a RabbitMQ instance expires. The system attempts to automatically renew the instance at 03:00 seven days before the instance expires. If the fee deduction fails, there is one attempt at 03:00 every day until the instance expires or the renewal is successful.
- After auto-renewal is enabled, you can still manually renew your RabbitMQ instance. After a manual renewal is complete, auto-renewal still takes effect, and fees start to be deducted seven days before the new subscription expires.
- Fees are deducted seven days before your subscription expires. You can change this deduction date as required.

Learn about **Auto-Renewal Rules** before enabling auto-renewal.

Prerequisites

Your yearly/monthly RabbitMQ instance has not expired.

Enabling Auto-Renewal When Buying a RabbitMQ Instance

You can enable auto-renewal when buying a RabbitMQ instance, as shown in **Figure 6-7**. For more information about buying a RabbitMQ instance, see **Buying an Instance**.

Figure 6-7 Enabling auto-renewal
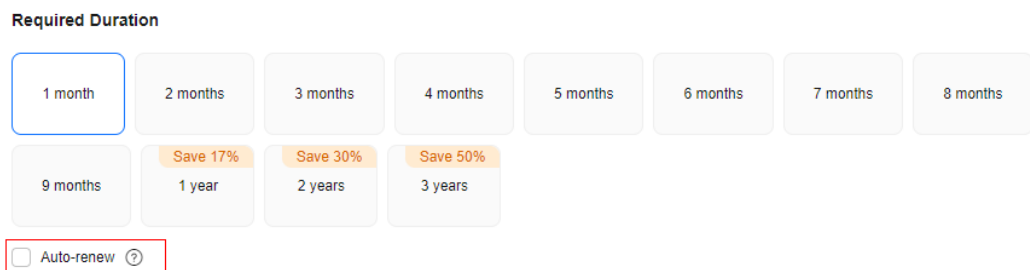
If you enable auto-renewal when buying a RabbitMQ instance, the auto-renewal periods are as follows:

- Monthly billing: Your subscription will be renewed each month.
- Yearly billing: Your subscription will be renewed each year.

Enabling Auto-Renewal on the Renewals Page

**Step 1** Go to the **Billing > Renewal** page.

Step 2 Customize search criteria.

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

**Step 3** Enable auto-renewal for yearly/monthly resources.

- Separate auto-renewal: Choose **More** > **Enable Auto-Renew** in the **Operation** column for the desired RabbitMQ instance.

Figure 6-8 Enabling auto-renewal for a single resource
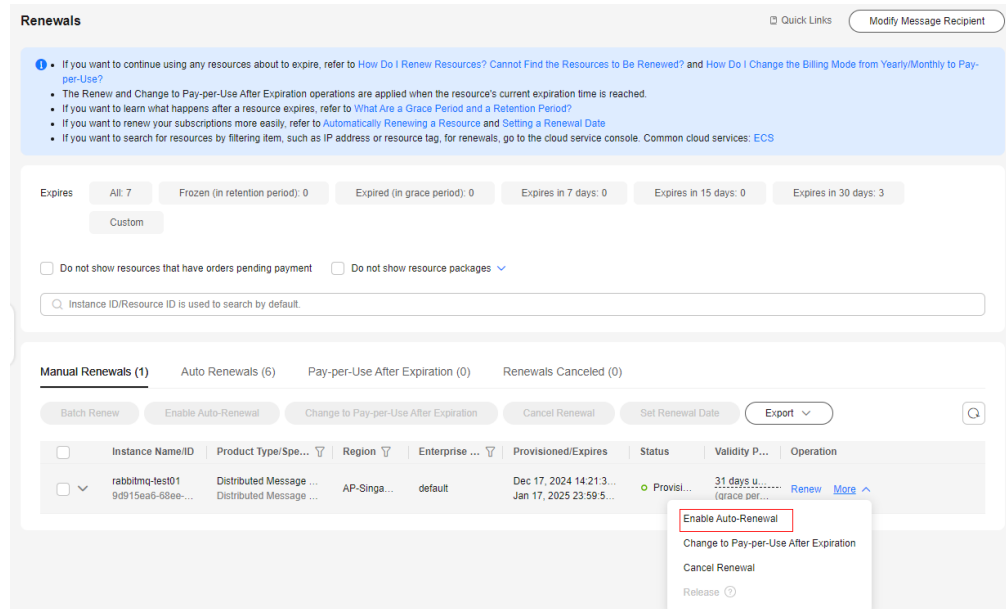
- Batch auto-renewal: Select the desired RabbitMQ instances and click **Enable Auto-Renew** above the list.

Figure 6-9 Enabling auto-renewal for multiple resources
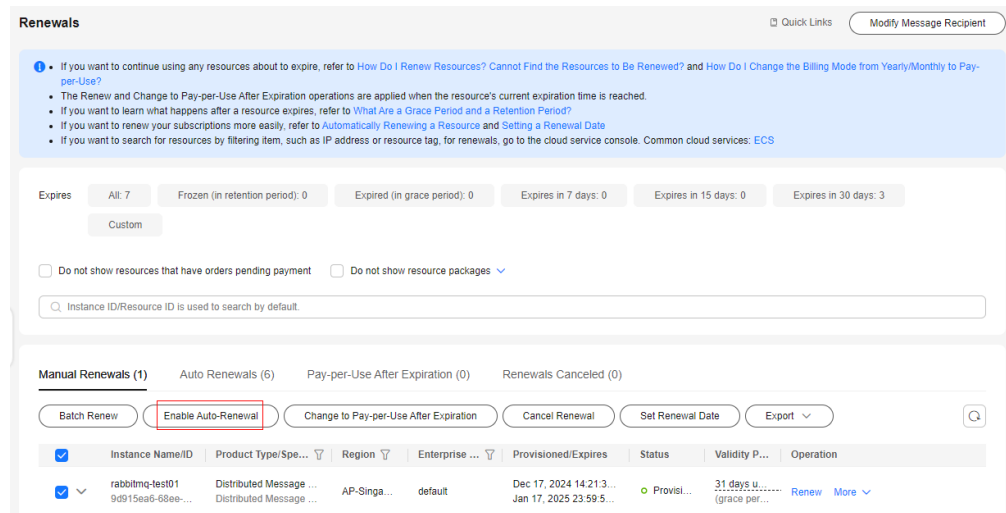
Step 4 Select a renewal period, specify the desired auto-renewal times, and click **Pay**.

If auto-renewal is enabled on the **Renewals** page, the auto-renewal period is subject to the selected renewal period and number of auto-renewals. For example, if you select three months renewal duration and do not select **Preset auto-renewals**, your subscription is automatically renewed for three months before each expiration.

Figure 6-10 Enabling auto-renewal
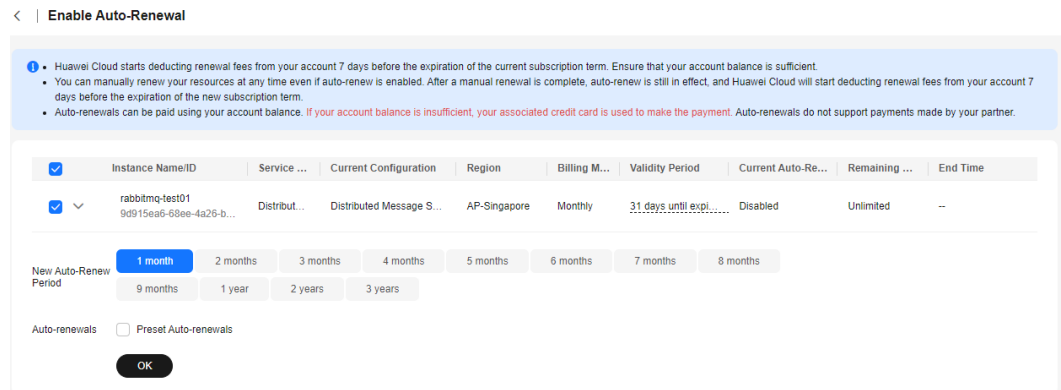
----**End**

7 Bills

You can view the bill of a resource in the **Billing** section of Billing Center to learn about its usage and billing information in a certain period.

The resource type **dms instance platinume** in the bill indicates the RabbitMQ instance. The resource type **dms physical storage** in the bill indicates the storage space. See **Figure 7-1**.

Figure 7-1 Bill

Billing...	Enterpr...	Accou... ⑦	Service Type	Resource Type	Billing Mode
Jan ...	default	hwstaff_pu...	Distributed Message Service DMS	dms instance platinume	Pay-per-Use
Jan ...	default	hwstaff_pu...	Distributed Message Service DMS	dms physical storage	Pay-per-Use

Bill Reporting Period

After yearly/monthly resources are paid, **two** bills (instance fee and storage space fee) are reported to the billing system for settlement.

The usage of pay-per-use resources is reported to the billing system at fixed intervals. Pay-per-use products can be settled by hour, day, or month based on the usage type. For details about the fee deduction rules, see **Bill Run for Pay-per-Use Resources**. Pay-per-use RabbitMQ instances are settled by hour.

The fee deduction time of pay-per-use resources may be later than the settlement period. For example, if a RabbitMQ instance (settled by hour) is deleted at 08:30, the fees generated from 08:00 to 09:00 are usually deducted at about 10:00. On the **Billing Center** > **Billing** > **Transactions and Detailed Bills** > **Transaction Bills** page, **Expenditure Time** indicates the time when a pay-per-use product is used.

Viewing Bills of a Specific Resource

Step 1 Log in to the console.

Step 2 Click ☰ in the upper left and choose **Middleware** > **Distributed Message Service (for RabbitMQ)** to open the console of DMS for RabbitMQ.

Step 3   Copy the resource ID.

RabbitMQ instances independently generate fees for the instance and the storage space, so there will be two bills. Check specified bills as required.

On the RabbitMQ instance list page, click the icon shown in the following figure to copy the instance ID.
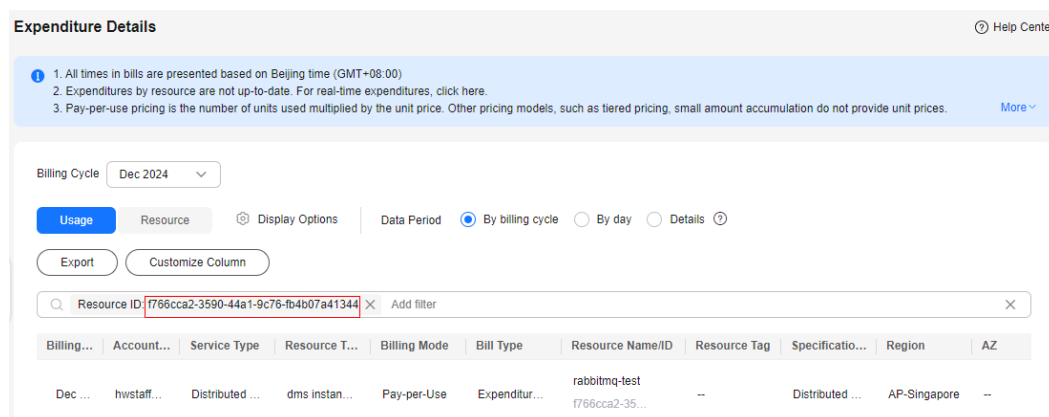
Figure 7-2 Obtaining the resource ID
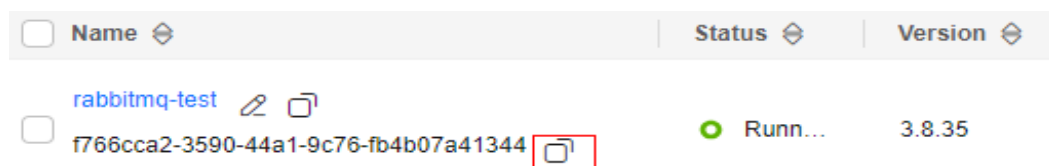
Click an instance name to go to the instance details page. Copy the storage space ID.

Step 4   Choose **Billing > Transactions and Detailed Bills**.

Step 5   Select **Resource Name or ID** as the filter, paste the VPC endpoint ID obtained in **Step 3**, and press **Enter**.

Figure 7-3 Querying a resource bill

By default, expenditure details are displayed by usage and the statistical period is a billing cycle. You can also set other statistical dimensions and periods. For details, see **Bills**.

----End

8 Arrears

When you use cloud services, your account goes into arrears when the balance is less than the bill to be settled. Cloud services may not run normally, so top up your account in time.

Arrears Reason

A pay-per-use RabbitMQ instance has been running for some time, and the account balance becomes insufficient.

Arrears Impact

- Yearly/Monthly

  For RabbitMQ instances billed on a yearly/monthly basis, you have paid for the resources in advance. Even if your account is in arrears, existing yearly/monthly RabbitMQ instances can still be used. However, you cannot perform operations that generate fees, such as purchasing RabbitMQ instances, expanding instance specifications, and renewing subscriptions.

- Pay-per-use

  When your account is in arrears due to automatic fee deduction for pay-per-use RabbitMQ instances, the account status turns to arrears. In arrears, the pay-per-use resource continues rendering service but the resource enters the grace period. You need to pay the fees of your pay-per-use resource incurred during the grace period. To view the fees, go to the **Billing Center** > **Overview** page. Huawei Cloud will deduct the fees after you top up your account.

  If you do not pay the arrears within the grace period, the resource enters the retention period and its status turns to **Frozen**. You cannot perform any operations on pay-per-use resources in the retention period.

  If you do not pay the arrears within the retention period, your RabbitMQ instance will be released, and data will be lost. Instances will be deleted permanently upon release.

Figure 8-1 Life cycle of a pay-per-use RabbitMQ instance
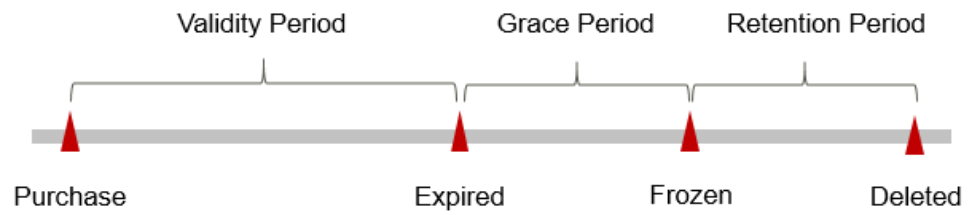
📖 **NOTE**

For details about the grace period and the retention period, see **What Is a Grace Period of Huawei Cloud? How Long Is It?** and **What Is a Retention Period of Huawei Cloud? How Long Is It?**

Avoiding and Handling Arrears

For details about topping up your account, see **Making Repayments (Postpaid Direct Customers)**.

Delete unnecessary RabbitMQ instances to avoid unexpected fees.

9 Stopping Billing

Yearly/Monthly Resources

You pay for a resource billed in yearly/monthly mode, such as a yearly/monthly RabbitMQ instance, when you purchase it. Billing automatically stops when the subscription expires.

- If a yearly/monthly resource is no longer needed before the subscription expires, you can unsubscribe from the resource. The system will return a certain amount of money to your account based on whether cash coupons or discount coupons are used. For details about unsubscription rules, see **Unsubscriptions**. Note: If recycling policies are enabled for yearly/monthly instances, the instances will be moved to Recycle Bin upon unsubscription. After that, they will not generate fees, but their storage will. To stop billing, delete them permanently in Recycle Bin.

- If you have enabled the auto-renewal function, disable it before the auto-renewal deduction date (seven days before the expiration date by default) to avoid unexpected fees.

Pay-per-Use Resources

If a pay-per-use RabbitMQ instance is no longer needed, you can delete it to stop billing. Note: If recycling policies are enabled for pay-per-use instances, the instances will be moved to Recycle Bin upon unsubscription. After that, they will not generate fees, but their storage will. To stop billing, delete them permanently in Recycle Bin.

Searching for Resources from Bills and Stopping Billing

From bills, you can find the IDs of all resources that incur fees. Then find the specific resources based on the IDs, and delete the resources. To do so, perform the following operations:

Step 1 Choose **Billing > Transactions and Detailed Bills**.

Step 2 Locate the row that contains the resource ID to be copied. Click the overlapping square next to the resource ID.

Figure 9-1 Copying resource ID
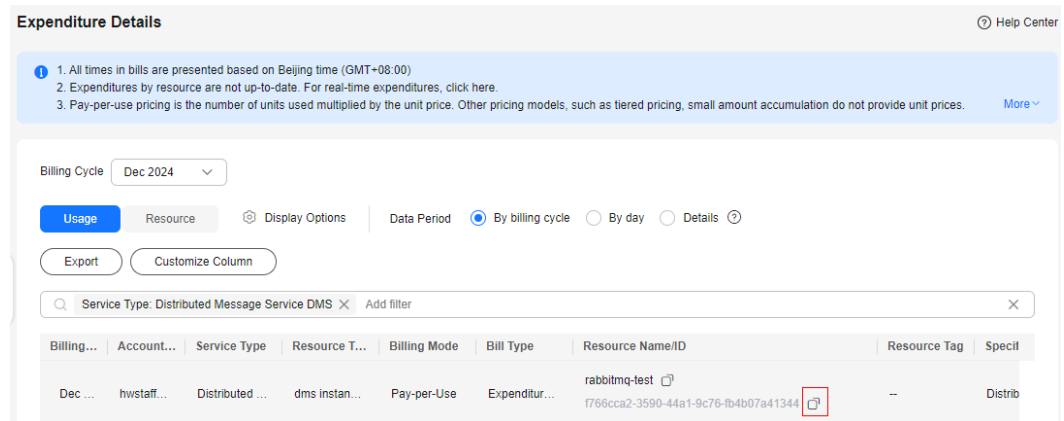
Step 3 In the service list, choose **Middleware** > **Distributed Message Service (for RabbitMQ)** to open the console of DMS for RabbitMQ.

Step 4 Select the region where the resource is located, enter the resource ID in **Step 2** in the search box, and press **Enter**.

If the RabbitMQ instance is not found, it may have been deleted and be in Recycle Bin. In Recycle Bin, click the RabbitMQ instance name to go to the instance details page. Check whether the resource ID in **Step 2** is the disk storage ID. If yes, the resource is billed. If no, check other IDs until the resource is found.

Figure 9-2 Searching for resources
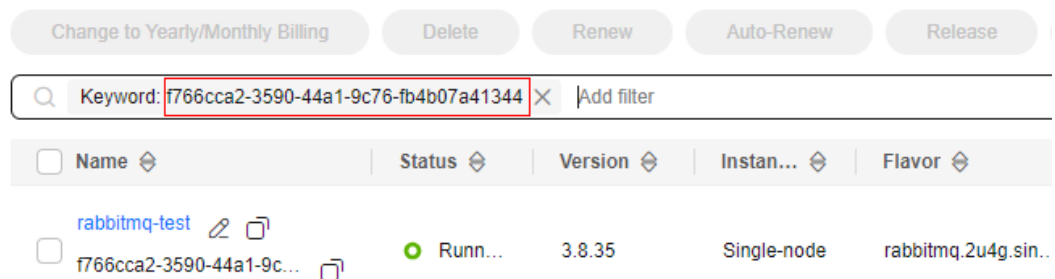
Step 5 Click **More** > **Delete** in the **Operation** column to delete the RabbitMQ instance. Ensure that the RabbitMQ instance does not exist in the list.

📖 **NOTE**

The system usually deducts fees of the last settlement period within one hour after the products are used. As a result, after a pay-per-use resource is deleted, the bill information may still exist. For example, if you delete a pay-per-use RabbitMQ instance at 08:30, the fees generated from 08:00 to 09:00 are usually deducted at about 10:00.

----End

10 Cost Management

Enterprises are paying more and more attention to the cost of using cloud. The following describes how to manage costs from four dimensions: cost composition, allocation, analysis, and optimization, to help maximize return on your investment.

Cost Composition

DMS for RabbitMQ incurs two types of costs:

- Resource cost: cost of various types of resources (billing items of DMS for RabbitMQ). For details, see **Billing Items**.
- O&M cost: labor cost generated during the use of DMS for RabbitMQ.

Figure 10-1 RabbitMQ costs
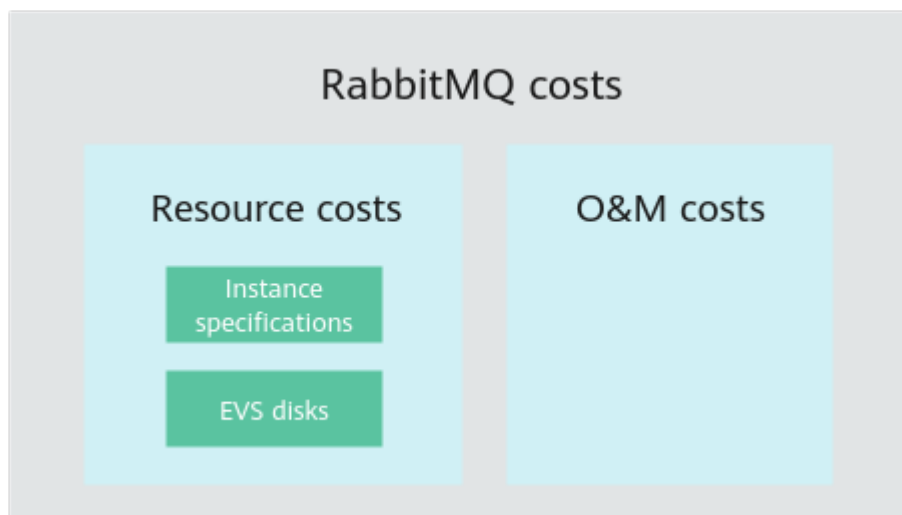
Huawei Cloud **Cost Center** helps you manage resource costs with ease. However, you need to identify, manage, and optimize O&M costs by yourself.

Cost Allocation

A good cost accountability system is the basis of cost management. It ensures that departments, business teams, and owners are accountable for their respective

cloud costs. Allocate costs to different teams or projects so that organizations have a clear picture of their respective costs.

Huawei Cloud **Cost Center** supports cost collection and reallocation with multiple tools for you to choose from.

- **Allocate costs by linked account.**

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

- **Allocate costs by enterprise project.**

  Before allocating costs, enable Enterprise Project Management Service (EPS) and plan your enterprise projects based on your organizational structure or businesses. Select an enterprise project for a newly purchased cloud resource so that the costs of that resource will be allocated to the selected enterprise project. For details, see **Viewing Costs by Enterprise Project**.

  Figure 10-2 Selecting an enterprise project for a RabbitMQ instance

- **Allocate costs by cost tag.**

  Huawei Cloud assigns tags to your cloud resources so they can be sorted in different ways, for example, by purpose, owner, or environment. The following is the process of managing costs by predefined tags.

  Figure 10-3 Adding tags to a RabbitMQ instance

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

- **Allocate costs by cost category.**

  You can use **Cost Categories** provided by **Cost Center** to split shared costs. Shared costs include the costs for the resources (compute network, storage, or resource packages) shared across departments or the costs that cannot be directly split by cost tag or enterprise project configured for the resources. These costs are not directly attributable to a singular owner, and hence cannot be categorized into a singular cost category. In this case, you can define cost splitting rules to fairly allocate these costs among teams or business units. For details, see **Viewing Costs By Cost Category**.

Cost Analysis

To accurately 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 or 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 and send alerts to the recipients you configured if the thresholds you defined are reached. You can also create budget reports and Huawei Cloud will periodically generate and send to the recipients you configured on a schedule you set.

  Suppose that you want to create a monthly budgeted amount of USD2,000 for a pay-per-use RabbitMQ instance, and to receive an alert if the forecasted amount exceeds 80% of the budgeted amount.

Figure 10-4 Setting budget information

Specify Budget Name

> RabbitMQ-2000

Configure Budget Details

Reset Period   Cost Center will reset your budgeting based on the reset period you select

| Daily | **Monthly** | Quarterly | Yearly |

Budget evaluation begins at 00:00 GMT+08:00 on the 1st day of the start month and will be reset to zero at 00:00 GMT+08:00 on the 1st day of each month moving forward

Budget Duration   Cost Center will monitor your expenditures during the budget duration you select

| **Recurring** | Expiring |

Start Time   Cost Center will begin to monitor your budget on the start date you select

> 2024/12

Allocation

| **Fixed** | Monthly | Dynamic |

Budgeted Amount (USD)

> 2000

Last month's cost: $547.67 USD

Figure 10-5 Setting the budget scope

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

- **Resource optimization**

  Cloud Eye helps you monitor resource usage, identify idle resources, and find opportunities to save costs. You can also identify resources with high costs based on the results of **Cost Analysis** and take optimization measures accordingly.

  - Monitor resource usage and evaluate whether the current configuration is too high. For example, monitor the usage of CPU, memory, and disk.

  - Detect idle resources to avoid waste. For example, detect unattached EVS disks and unbound EIPs.

- **Billing mode selection**

  Different types of services have different requirements on resource usage periods and therefore require different billing modes to achieve the optimal outcome.

  - For mature services that are stable for a long time, use the yearly/monthly billing mode.

  - For short-term, unpredictable services that experience traffic bursts and cannot be interrupted, use pay-per-use billing.

- **O&M automation**

  Huawei Cloud also provides various O&M products to help you improve O&M efficiency and reduce O&M labor costs. For example:

  - **Auto Scaling**: Continuously maintain instance clusters across billing modes, AZs, and instance specifications. Use this service when there is a clear distinction between peak and off-peak loads.

- **Resource Formation Service**: Deploy and maintain resource stacks that contain multiple cloud resources and dependencies with a few clicks. Use this service when for delivery of the entire system and clone environment.
- **O&M automation**: Define a group of O&M operations as services to execute O&M tasks with ease. Use this service for scheduled O&M, batch O&M, and cross-region O&M.