

Distributed Message Service for RocketMQ

Billing

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1 Overview

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

- **Billing Modes**

DMS for RocketMQ 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 for your subscription period. Therefore, you need to ensure sufficient account balance. Pay-per-use is a postpaid mode. You can use the service first, and will be billed for your usage duration. For details, see [Overview](#).

After purchasing a RocketMQ instance, you can change your billing mode to meet changing needs. For details, see [Overview](#).

- **Billing Items**

Fees of DMS for RocketMQ 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 RocketMQ instances cannot run after their subscription expires. To continue using your RocketMQ 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 RocketMQ 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](#).

2 Billing Modes

2.1 Overview

DMS for RocketMQ 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 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 RocketMQ 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 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 if you want a long-term use at low costs. Suitable for scenarios where resource usage periods 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 RocketMQ 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 RocketMQ charges you for your RocketMQ instance and disk storage space. They support yearly/monthly billing.

Table 2-2 Billing items

Billing Item	Description
Instance	<ul style="list-style-type: none"> V4.8.0 instance: broker flavor and quantity V5.x basic or professional edition instance: TPS and deployment type
Storage space	<p>Fees of the total storage space. The storage space of a yearly/monthly RocketMQ instance is also billed in the yearly/monthly mode.</p> <p>For v4.8.0, the fees = Storage space per broker × Number of brokers.</p>

Assume that you plan to purchase a RocketMQ 4.8.0 instance with 300 GB storage space. At the bottom of the **Buying a RocketMQ Instance** page, you can view price details, as shown [Figure 2-1](#).

Figure 2-1 Example price

Price:	
Billed Resource	Amount
Instance Price	\$806.40 USD
Data Disk Price	\$21.00 USD
Price: \$827.40 USD ⓘ	

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 RocketMQ 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 RocketMQ 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 RocketMQ 4.8.0 instance (rocketmq.4u8g.cluster.small x 1, 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 RocketMQ instance resources are charged individually. The billing formula is shown in [Table 2-3](#).

Table 2-3 Billing formulas

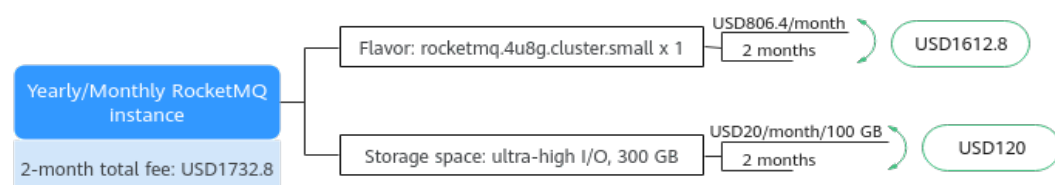
Resource Type	Billing Formula	Resource Unit Price
Instance	Instance specification unit price x Purchase duration	For instance prices, see Product Pricing Details .
Storage space	Storage space unit price x Purchase period	For storage prices, see Product Pricing Details .

[Figure 2-2](#) shows the billing calculation.

NOTICE

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 RocketMQ instance (AP-Singapore)



Impact on Billing After Specification Change

If the current resource specifications of your yearly/monthly RocketMQ instance no longer meet your needs, you can change the specifications on the RocketMQ

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 RocketMQ instance (rocketmq.4u8g.cluster × 1) for one month in AP-Singapore on Apr 08, 2023, and you plan to change the specification to rocketmq.8u16g.cluster × 1 on Apr 18, 2023. The price for the old specification is USD1344/month, and the new one is USD2592/month. The formula is as follows:

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

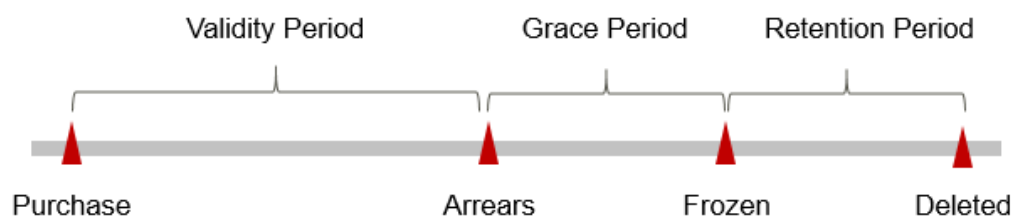
The remaining period in the formula is the remaining days of each calendar month divided by the maximum days of corresponding calendar month. In this sample, the remaining period = 12/30 (the remaining days of April/the maximum days of April) + 8/31 (the remaining days of May/the maximum days of May) = 0.6581. Then, the upgrade fees = 2592 × 0.6581 – 1344 × 0.6581 = USD821.31.

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 RocketMQ instance. After purchase, the RocketMQ instance runs properly within the billing period, and this period is the validity period. When the RocketMQ 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 RocketMQ instance



Expiration Reminder

From the 7th day before a yearly/monthly RocketMQ 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 RocketMQ instance expires, it goes into the grace period and its status turns to **Expired**. Within the grace period, you can access your RocketMQ instance, but the following operations will be restricted.
 - Changing specifications.

- Yearly/Monthly RocketMQ instances will be deleted permanently upon unsubscription.
- Retention period
If you do not renew your yearly/monthly RocketMQ 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 RocketMQ instance in the retention period.
- Permanent release
Renew yearly/monthly RocketMQ 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 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 RocketMQ 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

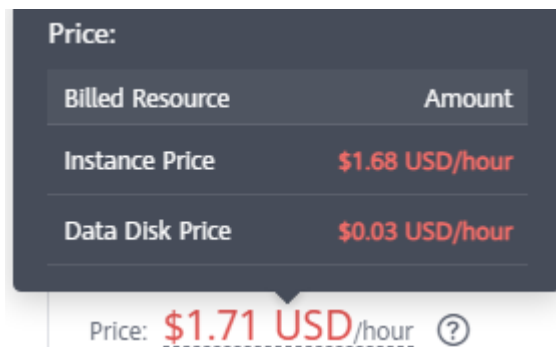
DMS for RocketMQ charges you for your RocketMQ instance and disk storage space. They support pay-per-use billing.

Table 2-4 Billing Items

Billing Item	Description
Instance	<ul style="list-style-type: none"> V4.8.0 instance: broker flavor and quantity V5.x basic or professional edition instance: TPS and deployment type
Storage space	Fees of the total storage space. For v4.8.0, the fees = Storage space per broker × Number of brokers.
Flexible TPS	For the v5.x professional edition, this item is based on the increment above the maximum TPS of the instance. The fee is generated for the maximum incremental TPS within one hour. NOTE The professional edition is in an open beta test (OBT).

Assume that you plan to purchase a RocketMQ 4.8.0 instance with 300 GB storage space. At the bottom of the **Buying a RocketMQ Instance** page, you can view price details, as shown [Figure 2-4](#).

Figure 2-4 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

A pay-per-use RocketMQ 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 RocketMQ instance is successfully created and ends at the time when the instance is deleted.

For example, if you purchase a pay-per-use RocketMQ 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 RocketMQ 4.8.0 instance (rocketmq.4u8g.cluster.small x 1, 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 RocketMQ 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

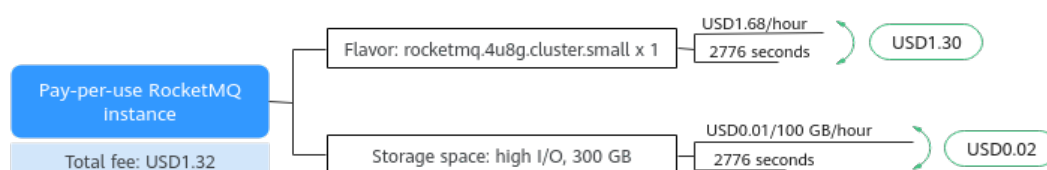
Resource Type	Billing Formula	Resource Unit Price
Instance	Instance specification unit price x Purchase duration	For instance prices, see Product Pricing Details .
Storage space	Storage space unit price x Purchase period	For storage prices, see Product Pricing Details .

[Figure 2-5](#) shows the billing calculation.

NOTICE

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 RocketMQ 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.

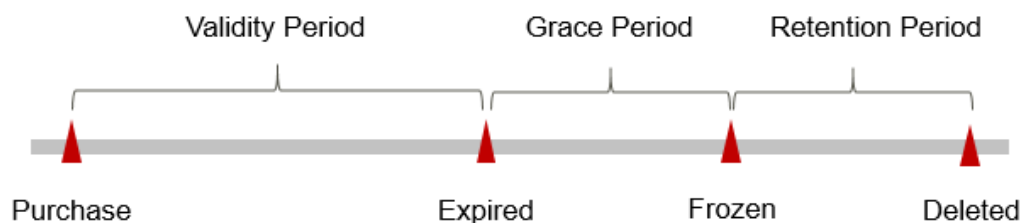
For example, assume that you purchase a pay-per-use instance (rocketmq.4u8g.cluster x 1) at 9:00:00. You upgrade the instance flavor to rocketmq.8u16g.cluster x 1 at 9:30:00. Then, two billing records are generated from 9:00:00 to 10:00:00.

- The first billing record corresponds to 9:00:00–9:30:00, based on the price for rocketmq.4u8g.cluster x 1.
- The second billing record corresponds to 9:30:00–10:00:00, based on the price for rocketmq.8u16g.cluster x 1.

Arrears Impact

Figure 2-6 describes the status of each stage of a pay-per-use RocketMQ instance. After you purchase a RocketMQ 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 RocketMQ instance leads to arrears on your account, the account status turns to arrears, and your RocketMQ instance enters the grace period and retention period accordingly.

Figure 2-6 Life cycle of a pay-per-use RocketMQ 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 RocketMQ 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 RocketMQ 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 RocketMQ 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 RocketMQ consist of instance fees and storage space fees. For details, see [Table 3-1](#).

Table 3-1 Billing items of DMS for RocketMQ

Billing Item	Description	Billing Mode	Billing Formula
Instance	<ul style="list-style-type: none"> V4.8.0 billing factors: broker specifications and quantity V5.x basic or professional edition billing factors: TPS and deployment type <p>NOTE To check this billing item, see dms instance platinum in the bill, as shown in Figure 3-1.</p>	Yearly/Monthly and pay-per-use	<p>Instance specification unit price x Purchase duration</p> <p>For the instance specification unit price, see Product Pricing Details.</p>
Storage space	<p>Billing factors: EVS disk type and capacity</p> <p>NOTE To check this billing item, see dms physical storage in the bill, as shown in Figure 3-1.</p>	Yearly/Monthly and pay-per-use	<p>EVS disk unit price x Purchase duration</p> <p>For the EVS unit price, see Product Pricing Details.</p>

Billing Item	Description	Billing Mode	Billing Formula
Flexible TPS	For the v5.x professional edition, this item is based on the increment above the maximum TPS of the instance. The fee is generated for the maximum incremental TPS within one hour.	Pay for usage (pay after use) Irrelevant to the billing mode.	Flexible TPS fee per hour = Maximum incremental TPS within 1 hour × Unit price of flexible TPS

Figure 3-1 Bill

Billing...	Enterpr...	Accou... ?	Service Type	Resource Type	Billing Mode
Jan ...	default	hwstaff_pu...	Distributed Message Service DMS	dms instance platinum	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 RocketMQ 4.8.0 instance (rocketmq.4u8g.cluster.small x 1, 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:

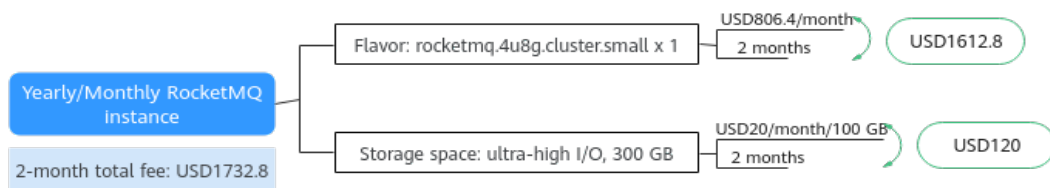
- The first billing period: Mar 08, 2023, 15:50:04–Apr 08, 2023, 23:59:59
- The second billing period: Apr 08, 2023, 23:59:59–May 08, 2023, 23:59:59

Figure 3-2 shows the billing calculation.

NOTICE

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 RocketMQ 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 RocketMQ 4.8.0 instance in AP-Singapore on Mar 18, 2023, 15:30:00:

- Flavor: rocketmq.4u8g.cluster x 1
- Total storage space: high I/O, 300 GB

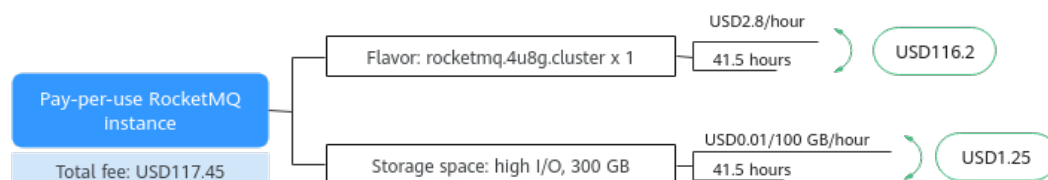
After a period of time, the user finds the current RocketMQ instance no longer meets service requirements. The flavor is upgraded to rocketmq.8u16g.cluster x 1 on Mar 20, 2023, 9:00:00. Since the RocketMQ instance is intended for long-term use, the billing mode is switched to yearly/monthly on Mar 20, 2023, 10:30:00, and the billing period is for one month. How much is the total fee of the RocketMQ instance in March and April?

Billing Analysis

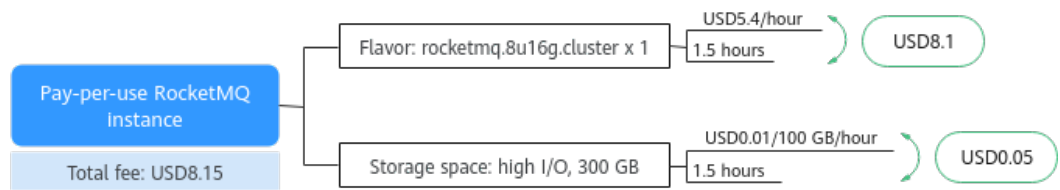
The usage of the RocketMQ instance can be divided into two phases based on the billing mode: pay-per-use from Mar 18, 2023, 15:30:00 to Mar 20, 2023, 10:30:00, and yearly/monthly from Mar 20, 2023, 10:30:00 to Apr 20, 2023, 23:59:59.

Pay-per-Use

From Mar 18, 2023, 15:30:00 to Mar 20, 2023, 09:00:00, the billing is based on rocketmq.4u8g.cluster x 1 for 41.5 hours. The fees are calculated as follows:

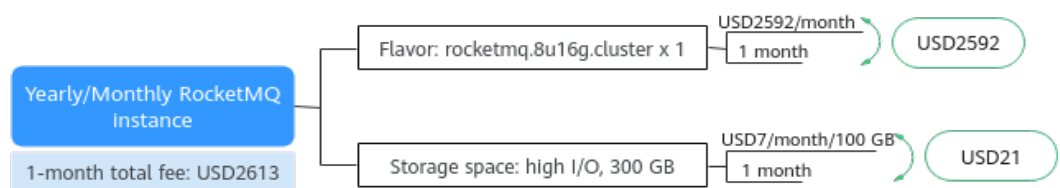


From Mar 20, 2023, 09:00:00 to Mar 20, 2023, 10:30:00, the billing is based on rocketmq.8u16g.cluster x 1 for 1.5 hours. The fees are calculated as follows:



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 RocketMQ instance: $117.45 + 8.15 + 2613 = \text{USD}2738.6$.

5 Billing Mode Changes

5.1 Overview

After purchasing a RocketMQ instance, you can change your billing mode to meet changing needs. [Table 5-1](#) lists the billing items of RocketMQ instances.

Table 5-1 Billing items of RocketMQ instances

Billing Item	Description	Reference
Instance specifications	<p>Changing the billing mode of a RocketMQ instance will also change the billing mode of the instance specifications and storage space.</p> <ul style="list-style-type: none">• 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 RocketMQ resources more flexibly. <p>The pay-per-use mode takes effect only after a yearly/monthly period expires.</p>	<ul style="list-style-type: none">• Pay-per-Use to Yearly/Monthly• Yearly/Monthly to Pay-per-Use
Storage space	<p>The billing mode of storage space cannot be changed separately. It will be changed when the instance's billing mode is changed.</p>	<ul style="list-style-type: none">• 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 RocketMQ 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 RocketMQ 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 RocketMQ 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 RocketMQ instance's billing mode changes, the billing mode of the EVS disks bound to the instance also changes.

Prerequisites

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

Procedure

Step 1 Log in to the console.

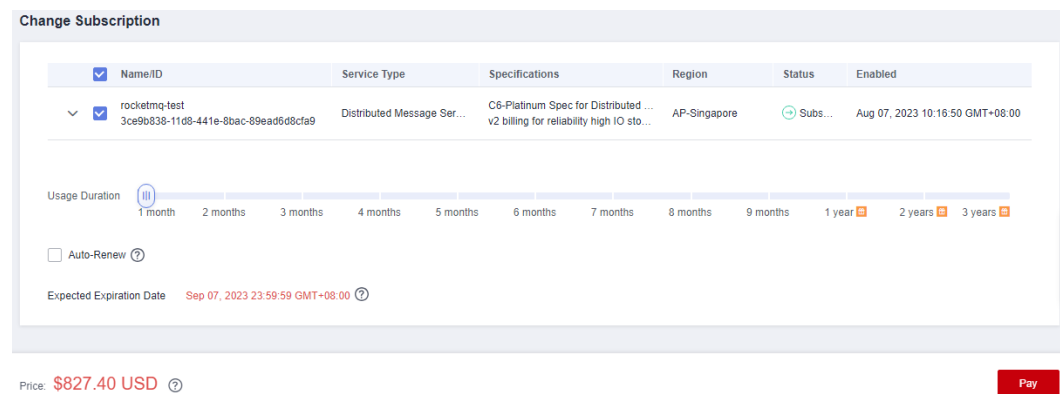
Step 2 Click  in the upper left and choose **Middleware** > **Distributed Message Service (for RocketMQ)**.

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

- Select one or more RocketMQ 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 RocketMQ instance, choose **More** > **Change to Yearly/Monthly Billing**.
- Click the desired RocketMQ instance to go to the instance details page. 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 RocketMQ instance, you can change the billing mode to pay-per-use to reclaim some costs and use the instance more flexibly.

Constraints


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

Prerequisites

- The billing mode of the RocketMQ instance is **Yearly/Monthly**.
- The RocketMQ 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 RocketMQ)**.

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

- Single resource: Select the desired RocketMQ instance, and choose **More > Change to Pay-per-Use After Expiration** in the **Operation** column.
- One or more resources: Select one or more RocketMQ instances and click **Change Billing Upon Expiration** in the upper left corner of the instance list. 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 RocketMQ instance for which you want to change the billing mode, and choose **More > Change to Pay-per-Use After Expiration** in the **Operation** column.
 - Multiple resources: Select the RocketMQ instances for which you want to change the billing mode, and click **Change to Pay-per-Use After Expiration** above the resource list.
- Step 4** Confirm the subscription change details, and click **Change to Pay-per-Use After Expiration**.
- End

6 Renewal

6.1 Overview

Description

Yearly/Monthly RocketMQ 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 RocketMQ instances can be renewed. Pay-per-use RocketMQ 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 RocketMQ instance is not affected. For details about the statuses of a RocketMQ instance after it expires, see [Impact of Expiration](#).

Renewal Functions

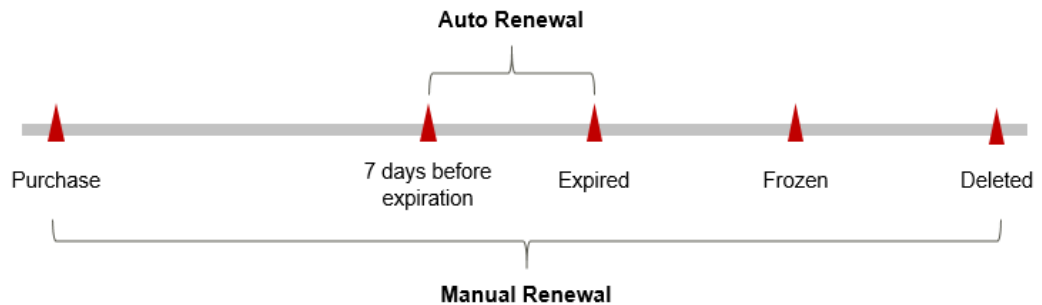
[Table 6-1](#) describes the functions related to the renewal of yearly/monthly RocketMQ instances.

Table 6-1 Functions

Function	Description
Manual renewal	To use a yearly/monthly RocketMQ 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, RocketMQ 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 RocketMQ instance, as shown in [Figure 6-1](#).

Figure 6-1 Life cycle of a RocketMQ instance



- A RocketMQ 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 RocketMQ 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 RocketMQ 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 RocketMQ 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 management console.

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

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

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

- In the row containing the desired instance, choose **More > Renew**.
- Click the desired RocketMQ 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**.

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 6-2 Separate renewal

Instance Name/ID	Product Type/Specifica...	Region	Enterprise Pr...	Provisioned/Expires	Status	Validity Period	Operation
<input type="checkbox"/> rocketmq-test01 e55f4028-c996-4b27-a97...	Distributed Message Ser... C6-Platinum Spec for Dis...	AP-Singapore	default	Aug 01, 2023 09:05:17 GMT+08:00 Sep 01, 2023 23:59:59 GMT+08:00	Provisioned	25 days until expir..... Delete after reteni...	Renew More ▾

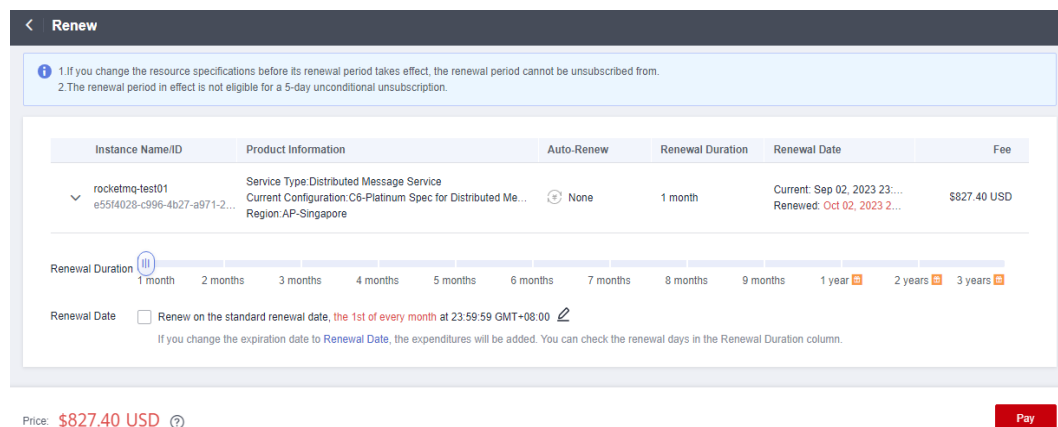
- Batch renewal: Check the boxes for the desired resources, and click **Batch Renew** in the upper left corner.

Figure 6-3 Batch renewal

Instance Name/ID	Product Type/Specifica...	Region	Enterprise Pr...	Provisioned/Expires	Status	Validity Period	Operation
<input checked="" type="checkbox"/> rocketmq-test01 e55f4028-c996-4b27-a97...	Distributed Message Ser... C6-Platinum Spec for Dis...	AP-Singapore	default	Aug 01, 2023 09:05:17 GMT+08:00 Sep 01, 2023 23:59:59 GMT+08:00	Provisioned	25 days until expir..... Delete after reteni...	Renew More ▾
<input checked="" type="checkbox"/> rocketmq-test e55f4028-c996-4b27-a97...	Distributed Message Ser... C6-Platinum Spec for Dis...	AP-Singapore	default	Aug 01, 2023 09:05:17 GMT+08:00 Sep 01, 2023 23:59:59 GMT+08:00	Provisioned	25 days until expir..... Delete after reteni...	Renew More ▾

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 6-4 Confirming renewal



Step 5 Select a payment method and make your payment. Once the order is paid, the renewal is complete.

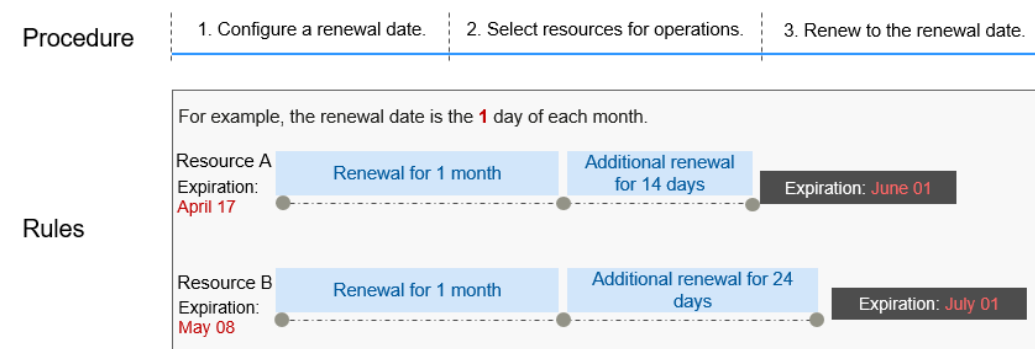
----End

Setting a Renewal Date

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

In [Figure 6-5](#), a user renews two resources that will expire at different time for one month and sets a fixed renewal date.

Figure 6-5 Setting a fixed renewal date



For details, see [Setting a Renewal Date](#).

6.3 Auto Renewal

Auto-renewal makes renewal easier and prevents RocketMQ 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 RocketMQ instance.
- The auto-renewal period of a RocketMQ instance varies depending on how you enable auto-renewal.

- Auto-renewal can be enabled any time before a RocketMQ 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 RocketMQ 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 RocketMQ instance has not expired.

Enabling Auto-Renewal When Buying a RocketMQ Instance

You can enable auto-renewal when buying a RocketMQ instance. For more information about buying a RocketMQ instance, see [Buying an Instance](#).

If you enable auto-renewal when buying a RocketMQ 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.

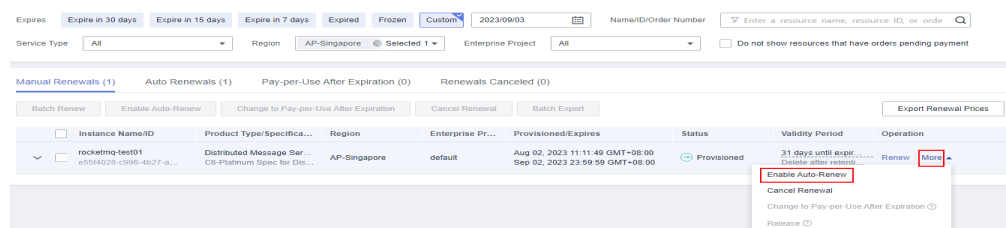
Step 2 Customize search criteria.

- 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.

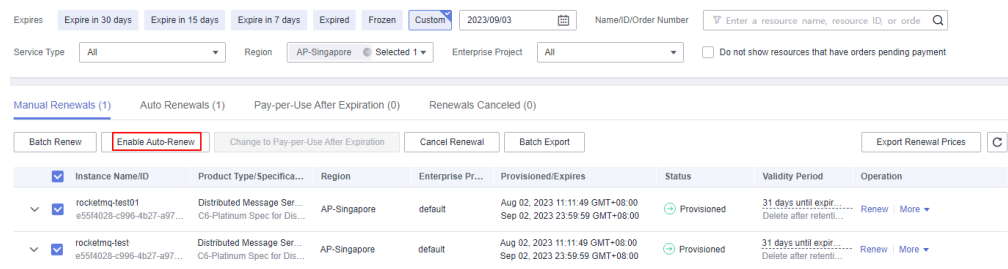
- Separate auto-renewal: Choose **More > Enable Auto-Renew** in the **Operation** column for the desired RocketMQ instance.

Figure 6-6 Enabling auto-renewal for a single resource



- Batch auto-renewal: Select the desired RocketMQ instances and click **Enable Auto-Renew** above the list.

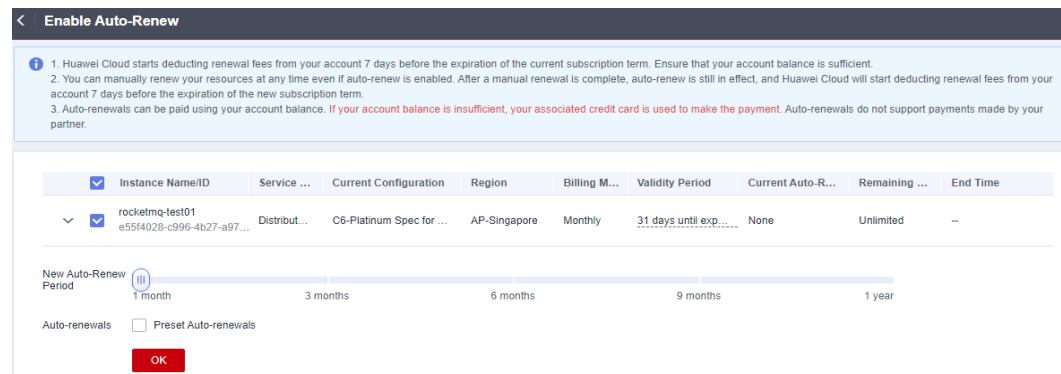
Figure 6-7 Enabling auto-renewal for multiple resources



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 6-8 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.

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 RocketMQ 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 RocketMQ 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 management console.

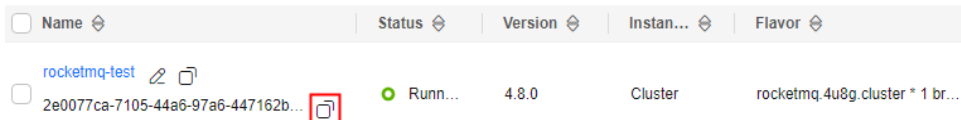
Step 2 Click  in the upper left and choose **Middleware > Distributed Message Service (for RocketMQ)** to open the console of DMS for RocketMQ.

Step 3 Copy the resource ID.

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

- On the RocketMQ instance list page, click the icon shown in the following figure to copy the instance ID.

Figure 7-1 Copying instance ID






Name	Status	Version	Instan...	Flavor
rocketmq-test				
2e0077ca-7105-44a6-97a6-447162b...	Runn...	4.8.0	Cluster	rocketmq.4u8g.cluster * 1 br...

- Click an instance name to go to the instance details page. Copy the storage space ID.

Figure 7-2 Copying storage space ID

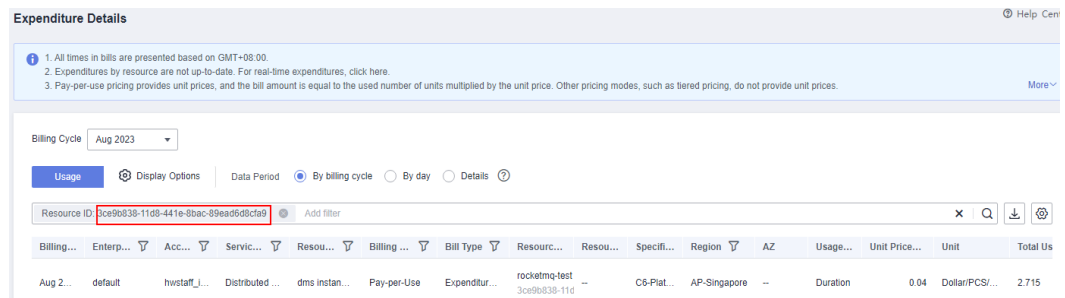
Storage Information

Storage Resource ID	d83f0765-7c53-434c-8f2d-1abd0f2e34a2 
Space Type	High I/O
Used/Available Storage Space (GB) 	 0/250
Total Storage (GB)	300

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

Step 5 Select **Resource ID** as the filter, paste the resource 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 RocketMQ instance has been running for some time, and the account balance becomes insufficient.

Arrears Impact

- Yearly/Monthly

For RocketMQ 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 RocketMQ instances can still be used. However, you cannot perform operations that generate fees, such as purchasing RocketMQ instances, expanding instance specifications, and renewing subscriptions.

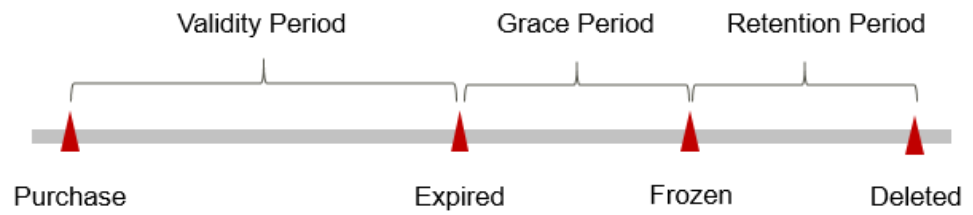
- Pay-per-use

When your account is in arrears due to automatic fee deduction for pay-per-use RocketMQ 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 RocketMQ 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 RocketMQ 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 RocketMQ 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 RocketMQ 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: 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. To stop billing, delete the instances from 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 RocketMQ instance is no longer needed, you can delete it to stop billing. Note: 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. To stop billing, delete the instances from Recycle Bin.

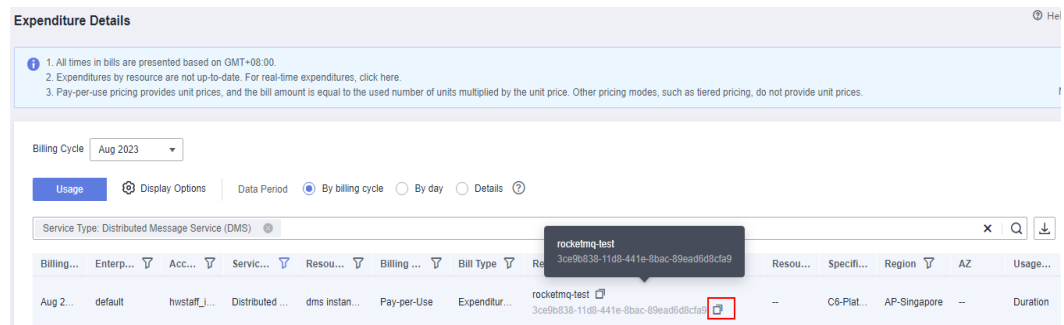
Searching for Resources from Bills and Stopping Billing

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

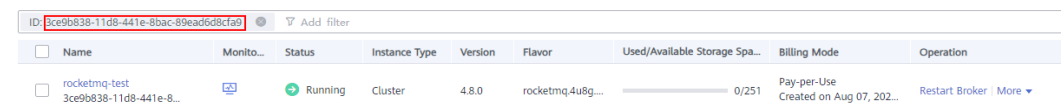


Step 3 In the service list, choose **Middleware > Distributed Message Service (for RocketMQ)** to open the console of DMS for RocketMQ.

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 RocketMQ instance is not found, it may have been deleted and be in Recycle Bin. In Recycle Bin, click the RocketMQ 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 RocketMQ instance. Ensure that the RocketMQ instance does not exist in the list. If recycling policies are enabled, go to Recycle Bin and delete the instance again. If the resource found in **Step 4** is already in Recycle Bin, click **Delete** in the Operation column.

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 RocketMQ instance at 08:30, the fees generated from 08:00 to 09:00 are usually deducted at about 10:00.

----End

10 Cost Management

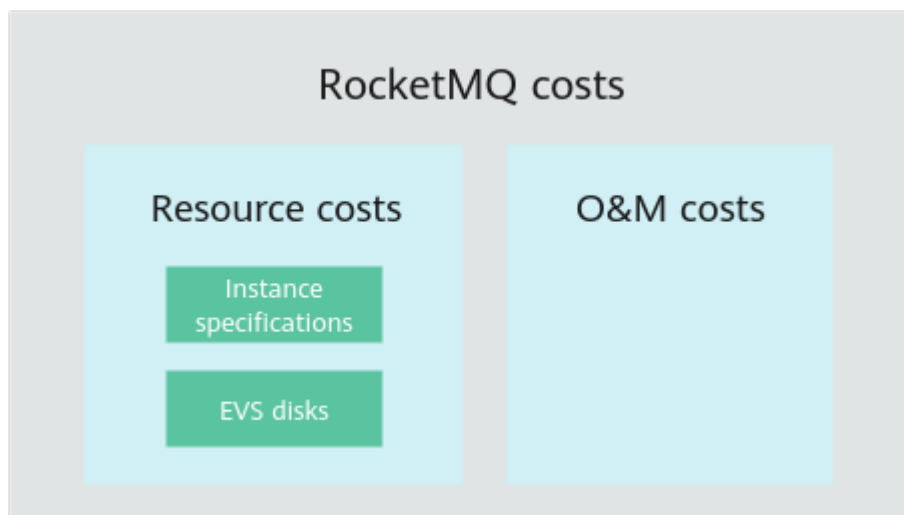
Enterprises are paying more and more attention to the cost of using cloud. The following describes how to manage costs from four dimensions: cost composition, allocation, analysis, and optimization, to help maximize return on your investment.

Cost Composition

DMS for RocketMQ incurs two types of costs:

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

Figure 10-1 RocketMQ 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 RocketMQ instance

Instance Name:

Enterprise Project: [View Enterprise Project](#)

- **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 RocketMQ instance

Tags

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

Tag key: Tag value:

You can add 20 more tags.

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 Cost 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 [Performing 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 USD2000 for a pay-per-use RocketMQ instance, and to receive an alert if the forecasted amount exceeds 80% of the budgeted amount.

Figure 10-4 Basic budget information

* Budget Name	<input type="text" value="RocketMQ-2000"/>	
* Reset Period	<input type="radio"/> Daily <input checked="" type="radio"/> Monthly <input type="radio"/> Quarterly <input type="radio"/> Yearly	Budget evaluation i
	GMT+08:00 on the 1st day of each month moving forward.	
* Budget Duration	<input checked="" type="radio"/> Recurring <input type="radio"/> Expiring	
* Start Time	<input type="text" value="2023/08"/>	
* Allocation	<input checked="" type="radio"/> Fixed <input type="radio"/> Monthly <input type="radio"/> Dynamic	
* Budgeted Amount (USD)	<input type="text" value="2000"/>	Last month's cost: \$3,072.67 USD

Figure 10-5 Budget scope

Service Type	Include	▲
Distributed Message Service (DMS) ×		1
Linked Account	All	▼
Region	All	▼
PayerAccount Name	All	▼
Specifications	All	▼
Usage Type	All	▼
Cost Tag	All	▼
Cost Categories	All	▼
Enterprise Project	All	▼
Business Entity	All	▼
Bill Type	All	▼
Billing Mode	Include	▲
Pay-per-Use ×		1
AZ	All	▼

Figure 10-6 Budget alerts

Thresholds Alerts are sent when the actual cost is higher than 80% (\$1,600.00) of the forecasted cost.

[Add threshold](#)

Recipients recipient (Email

[Select From Contacts](#)

For details, see [Enabling Forecasting and Creating Budgets to Track Cost 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.