

NAT Gateway

Billing

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1 Billing Overview

In this document, you will learn about how NAT gateways are billed, how you can renew subscriptions and manage costs, and what happens if your account goes into arrears.

- **Billing Modes**

There are yearly/monthly and pay-per-use billing modes. Each one has different advantages and disadvantages. Yearly/Monthly: You pay upfront for the amount of time you expect to use the NAT gateway for. You will need to make sure your account has sufficient balance. Pay-per-use: You can start using the NAT gateway first and then pay as you go. For details about the two billing modes, see [Overview](#).

 **NOTE**

Yearly/monthly NAT gateways are only available in the AP-Bangkok and AP-Singapore regions.

- **Billing Items**

You will be billed for NAT gateway type and specifications. For details about the billing factors and formulas for each billing item, see [Billing Items](#).

For more information about the billing samples and the billing for each item, see [Billing Examples](#).

- **Renewing Subscriptions**

If you want to continue using a NAT gateway after it expires, you need to renew the subscription within the specified period. Otherwise, the NAT gateway will be automatically released, and data may be lost. You can renew your subscriptions manually or automatically. For more details, see [Overview](#).

- **Viewing Bills**

You can choose **Billing & Costs > Bills** to check the NAT Gateway transactions and bills. For details, see [Bills](#).

- **Arrears**

If there is not a sufficient account balance to pay for your bill and there is no other payment method configured, your account will go into arrears. If you want to continue using your cloud services, you will need to top up your account in a timely manner. For details, see [Arrears](#).

- **Stopping Billing**

If you no longer need to use your NAT gateways, you can unsubscribe from or delete them to stop the billing. For details, see [Billing Termination](#).

- **Managing Costs**

You can allocate, analyze, and optimize NAT Gateway costs to save more money. For details, see [Cost Management](#).

2 Billing Modes

2.1 Overview

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

- Yearly/Monthly is a prepaid billing mode. You pay in advance for a subscription term, and in exchange, you get a discounted rate. The longer the subscription term, the bigger the discount. Yearly/Monthly billing is a good option for long-term, stable services.
- Pay-per-use is a postpaid billing mode. You pay as you go and just pay for what you use. A pay-per-use NAT gateway can be billed by day or 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.

Table 2-1 Differences between billing modes

Billing Mode	Yearly/Monthly	Pay-per-use
Payment	Prepaid Billed by the subscription term you purchase.	Postpaid Billed by the usage duration
Billing Method	Billed by the subscription term you purchase.	Billed by day or hour (calculated by the second but billed every hour)
Billing Items	NAT gateway type and specifications	NAT gateway type and specifications

Changing the Billing Mode	Yearly/Monthly can be changed to pay-per-use. The change takes effect only after the yearly/monthly subscription expires. For details, see Yearly/Monthly to Pay-per-Use .	Pay-per-use can be changed to yearly/monthly. For details, see Pay-per-Use to Yearly/Monthly .
Changing the Specifications	Public NAT gateway can only be upgraded to a gateway of more robust specifications.	Supported
Application Scenarios	Recommended for resources expected to be in use long-term. A cost-effective option for scenarios where the resource usage duration is predictable.	Recommended when the resource demands are likely to fluctuate and you want more flexibility.

 **NOTE**

Yearly/monthly NAT gateways are only available in the AP-Bangkok and AP-Singapore regions.

2.2 Yearly/Monthly Billing

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

Application Scenarios

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

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

Billing Items

Yearly/monthly public NAT gateways are billed based on the public NAT gateway specifications and the usage duration.

Billed Usage Period

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

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

Billing Examples

Suppose you purchased a small public NAT gateway for a month on March 08, 2023, 15:50:04, and renewed the subscription for one more month before the initial subscription expired. The following usage periods would be billed.

Table 2-2 Formulas for billing yearly/monthly public NAT gateways

Billed Usage Period	Formula	Total Price
Period 1 (one month): March 08, 2023, 15:50:04 to April 08, 2023, 23:59:59	Unit price of the public NAT gateway specification	$306 \times 1 = 306$
Period 2 (one month): April 08, 2023, 23:59:59 to May 08, 2023, 23:59:59	$s \times \text{Required duration}$	$306 \times 1 = 306$

NOTICE

The prices are just examples. The actual prices are those displayed on .

Price Change After Specification Change

If the specifications of a yearly/monthly public NAT gateway no longer meet your needs, you can change the specifications on the console. The system will recalculate the price and either bill or refund you the difference.

- If you upgrade your NAT gateway specifications, the billing will be based on the more robust specifications used on the same day, and you need to pay the difference in price.
- The specifications of a yearly/monthly public NAT gateway cannot be downgraded.

Suppose you purchased a one-month, small public NAT Gateway on April 08, 2023 and upgraded the specifications to medium on April 18, 2023. The price for the original specification was \$73.31 USD/month, and that for the new specifications was \$137.79 USD/month. The price difference will be calculated as follows:

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

In this example,

Remaining period = 12 (Remaining days in April)/30 (Maximum number of days in April) + 8 (Remaining days in May)/31 (Maximum number of days in May) = 0.6581

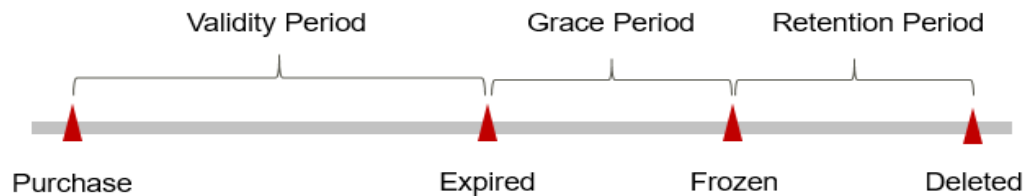
Cost of specifications upgrade = \$137.79 x 0.6581 - \$73.31 x 0.6581 = \$42.434

For more information, see [Pricing of a Changed Specification](#).

Impact of Expiration

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

Figure 2-1 Lifecycle of a yearly/monthly NAT gateway



Expiration Reminder

The system will send you a reminder (by email, SMS, or in-app message) 7 days before a yearly/monthly public NAT gateway expires to remind you to renew the subscription.

Impact of Expiration

- If your yearly/monthly ECS is not renewed after it expires, it changes to the **Expired** state and enters a grace period.
- If the yearly/monthly NAT gateway is not renewed after the grace period ends, its status turns to **Frozen** and it enters a retention period. You cannot perform any operations on the NAT gateway while it is in the retention period.
- If the yearly/monthly NAT gateway is not renewed by the time the retention period ends, it will be released and data cannot be restored.

NOTE

- For details about the grace period and 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](#).

2.3 Pay-per-use Billing

Pay-per-use billing means you pay nothing up front and are not tied into any contract or commitment. Public NAT gateways support pay-per-use billing by day

only. Private NAT gateways support pay-per-use billing by hour only. This section describes the billing rules for pay-per-use NAT gateways.

Application Scenarios

Pay-per-use billing is good for short-term, bursty, or unpredictable workloads that cannot tolerate any interruptions, such as applications for e-commerce flash sales, temporary testing, and scientific computing.

Billing Items

The fee of a pay-per-use NAT gateway is charged based on the NAT gateway type, specifications, and usage duration.

Billing Usage Period

Public NAT gateway

The billing cycle of a pay-per-use public NAT gateway is from 08:00 on the previous day to 08:00 on the next day. Any period less than one day is counted as one day.

For example, you purchased a small public NAT gateway charged by day on April 18, 2024, 06:00:00 and deleted it on April 19, 2024, 9:00:00. The following three usage periods will be billed:

- April 18, 2023, 06:00:00 to April 18, 2023, 8:00:00
- April 18, 2023, 08:00:00 to April 19, 2023, 8:00:00
- April 19, 2023, 08:00:00 to April 20, 2023, 8:00:00

Private NAT gateway

Pay-per-use private NAT gateway usage is calculated by the second and billed every hour. The billing starts when the private NAT gateway is launched and ends when the instance is deleted.

For example, if you purchased a small pay-per-use private NAT gateway on April 18, 2023, 8:45:30 and deleted it on April 18, 2023, 8:55:30, you are billed for the 600 seconds from 8:45:30 to 8:55:30.

Billing Examples

Public NAT gateway

Suppose you purchased a small public NAT gateway on April 18, 2023, 6:00:00 and deleted it on April 19, 2023 9:00:00, the NAT gateway are billed as follows:

Table 2-3 Example of billing a public NAT gateway (by day)

Billing Usage Period	Formula	Total Price (USD)
One day (April 18, 2023, 6:00:00 to April 18, 2023, 8:00:00)	Unit price of the public NAT gateway specifications x Required duration	$2.44 \times 1 = 2.44$
One day (April 18, 2023, 8:00:00 to April 19, 2023, 8:00:00)		$2.44 \times 1 = 2.44$
One day (April 19, 2023, 08:00:00 to April 20, 2023, 8:00:00)		$2.44 \times 1 = 2.44$

Private NAT gateway

Suppose you purchased a small private NAT gateway on April 18, 2023, 8:45:00 and deleted it on April 18, 2023, 9:55:00.

Table 2-4 Example of billing a private NAT gateway (by the hour)

Billing Usage Period	Formula	Total Price (USD)
One hour (April 18, 2023, 8:00:00 to April 18, 2023, 9:00:00)	Unit price of the private NAT gateway specifications x Required duration	$0.1/3600 \times 900 = 0.025$
One hour (April 18, 2023, 9:00:00 to April 18, 2023, 10:00:00)		$0.1/3600 \times 3300 = 0.09$

NOTICE

- The prices are examples only. The actual prices are those displayed on [NAT Gateway Pricing Details](#).
- The hourly price of a resource is displayed in the product pricing details. If the usage period of a resource is less than one hour, the usage period is calculated by second. In this case, you need to divide the hourly price by 3,600 to obtain the price for each second. Then, calculate the price.

Price Change After Specification Change

- If you upgrade your public NAT gateway specifications, the billing will be based on the more robust specifications used on the same day.
For example, you purchased a small, pay-per-use public NAT gateway at 9:00:00 on April 18, 2023, and upgraded it to a medium one at 9:30:00. Then you deleted the medium public NAT gateway at 10:30:00 on April 18, 2023. The medium public NAT gateway will be billed from April 18, 2023, 8:00:00 to April 19, 2023, 8:00:00.

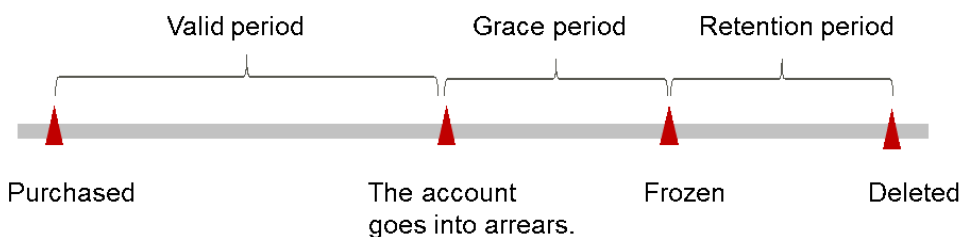
- If you purchase a pay-per-use private NAT gateway and change its specifications later, you will be billed separately (accurate to seconds) before and after the change in the current billing cycle (by hour).

For example, you purchased a small private NAT gateway at 9:00:00 on April 18, 2023, and upgraded it to a medium one at 9:30:00. Then you deleted the medium private NAT gateway at 10:30:00 on April 18, 2023. The first billing cycle is from April 18, 2023, 9:00:00 to April 19, 2023, 10:00:00. Charges incurred between 9:00:00 and 9:30:00 are billed based on the small specifications, and charges incurred between 9:30:00 and 10:00:00 are billed based on the medium specifications. The second billing cycle from April 18, 2023, 10:00:00 to April 19, 2023, 11:00:00. Charges incurred between 10:00:00 to 10:30:00 are billed based on the medium specifications.

Impact of Arrears

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

Figure 2-2 Lifecycle of a pay-per-use NAT gateway



Arrears Reminder

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

Impact of Arrears

- If your account is insufficient to pay your amount due, your account goes into arrears, and the pay-per-use ECS enters the grace period. You are still responsible for expenditures generated during the grace period. You can view the charges on the **Billing Center > Overview** page and pay any past due balance as needed.
- If you do not bring your account balance current before the grace period expires, the NAT gateway turns to **Frozen** and enters a retention period. You cannot perform any operations on a pay-per-use NAT gateway in the **Frozen** state.
- If you do not bring your account balance current before the retention period ends, your NAT gateway will be released and the data cannot be restored.

 NOTE

- For details about the grace period and 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 top-up, see [Topping Up an Account \(Prepaid Direct Customers\)](#).

3 Billing Items

Billing

Your usage of a NAT gateway is charged based on the NAT gateway type, specifications, and your usage duration. NAT Gateway provides two billing modes: yearly/monthly and pay-per-use to meet your requirements in different scenarios.

Table 3-1 NAT Gateway billing items

Billing Item	Description	Billing Mode	Formula
NAT gateway specifications	<ul style="list-style-type: none"> The NAT gateway performance is determined by the maximum number of SNAT connections supported. 	Yearly/monthly and pay-per-use	Unit price x Required duration For details about the unit price, see NAT Gateway Pricing Details .

Billing Examples

Suppose you purchased a small private NAT gateway at 15:30:00 on March 08, 2023, and deleted it at 16:50:00 on March 08, 2023. There will be two usage periods.

Table 3-2 Example of billing a private NAT gateway (by the hour)

Billing Usage Period	Formula	Total Price (USD)
One hour (March 08, 2023, 15:00:00 to March 08, 2023, 16:00:00)	Unit price of the private NAT gateway specifications x Required duration	$0.1/3600 \times 1800 = 0.05$
One hour (March 08, 2023, 16:00:00 to March 08, 2023, 17:00:00)		$0.1/3600 \times 3000 = 0.08$

NOTICE

The prices are only for reference. For details, see [NAT Gateway Pricing Details](#).

4 Billing Examples

Billing Scenario

At 15:00:00 on March 18, 2023, a user purchased a small pay-per-use public NAT gateway in the CN North-Beijing4 region. After a period of time, the user found that the current NAT gateway specifications no longer met service requirements and updated it to a large one on March 20, 2023. The user then deleted the large public NAT gateway at 12:00:00 on March 20, 2023. So how much will the user be billed for the two public NAT gateways?

Billing Analysis

The following usage periods will be billed:

Table 4-1 Formulas for billing public NAT gateways

Billing Usage Period	Billed Duration	Specific ations	Total Price (USD)
March 18, 2023, 15:00:00 to March 19, 2023, 8:00:00	One day	Small	$2.44 \times 1 = 2.44$
March 19, 2023, 8:00:00 to March 20, 2023, 8:00:00	One day	Small	$2.44 \times 1 = 2.44$
March 20, 2023, 8:00:00 to March 21, 2023, 8:00:00	One day	Large	$8.99 \times 1 = 8.99$

The total price of the NAT gateway is \$13.87 USD ($2.44 \times 2 + 8.99$).

NOTICE

The prices are only for reference. For details, see [NAT Gateway Pricing Details](#).

5 Billing Mode Changes

5.1 Overview

You can also change the billing mode later if it no longer meets your needs. If you change the billing mode of a public NAT gateway from yearly/monthly to pay-per-use, the pay-per-use billing mode takes effect only after the yearly/monthly billing mode expires. If you change the billing mode of a public NAT gateway from pay-per-use to yearly/monthly, the new billing mode will take effect immediately. Private NAT gateway supports only the pay-per-use billing mode (hourly) and the billing mode cannot be changed.

5.2 Pay-per-Use to Yearly/Monthly

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

Prerequisites



The billing mode of the public NAT gateway is pay-per-use.

NOTE

- The yearly/monthly billing mode can be changed to pay-per-use only for public NAT gateways.

Procedure

Step 1 Log in to the NAT Gateway console.

1. Log in to the management console.
2. Click  in the upper left corner and select the desired region and project.
3. Click  in the upper left corner and choose **Networking > NAT Gateway**.

- Step 2** On the **Public NAT Gateway** page displayed, locate the target public NAT gateway. In the **Operation** column, choose **Operation > Change Billing Mode**.
- Step 3** Select the required duration, confirm information, and click **Pay**.
- Step 4** Return to the **Public NAT Gateway** page and check whether **Billing Mode** of the Public NAT gateway has changed to **Yearly/Monthly**.
- End

5.3 Yearly/Monthly to Pay-per-Use

After creating a yearly/monthly public NAT gateway, you can change it to pay-per-use (billed by day) for more flexibility, and you can recoup part of what you paid for the subscription.

Prerequisites

The billing mode of the public NAT gateway is yearly/monthly.

NOTE

- The yearly/monthly billing mode can be changed to pay-per-use only for public NAT gateways.
- The pay-per-use billing mode will take effect only after the yearly/monthly subscription has expired.

Procedure

- Step 1** Log in to the management console.
- Step 2** Hover over **Billing & Costs** in the upper part of the console and choose **Renewal** from the drop-down list.
- The **Renewals** page is displayed.
- Step 3** Set the search criteria.
- Under the **Pay-per-Use After Expiration** tab, you can view the resources that already have changed to pay-per-use upon expiration configured.
 - Under the **Manual Renewals**, **Auto Renewals**, and **Renewals Canceled** tabs, you can change the resources to pay-per-use billing upon expiration.
- Step 4** Change yearly/monthly resources to pay-per-use billing upon expiration.
- Single resource: Select the public NAT gateway 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 public NAT gateways you want to change their billing modes and click **Change to Pay-per-Use After Expiration** above the public NAT gateway list.
- Step 5** Confirm the change details and click **Change to Pay-per-Use After Expiration**.
- Step 6** Return to the **Public NAT Gateways** page.

The pay-per-use mode does not take effect immediately. You can see that the billing mode of the target public NAT gateway has changed to pay-per-use only after the yearly/monthly billing mode expires.

----End

 **NOTE**

The NAT Gateway billing mode cannot be changed from yearly/monthly to pay-per-use on the NAT Gateway console. To do so, go to the **Billing & Costs > Renewals** page.

6 Renewing Subscriptions

6.1 Overview

When to Renew Subscriptions

If a yearly/monthly NAT gateway is about to expire but you want to continue using it, you need to renew the NAT gateway subscription within a specified period, or the NAT gateway will be automatically released, and data may be lost and cannot be restored.

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

If you renew the public NAT gateway before it expires, resources will be retained and you can continue using the public NAT gateway. For details about NAT gateway statuses after they have expired and the associated impacts, see [Impact of Expiration](#).

How to Renew Subscriptions

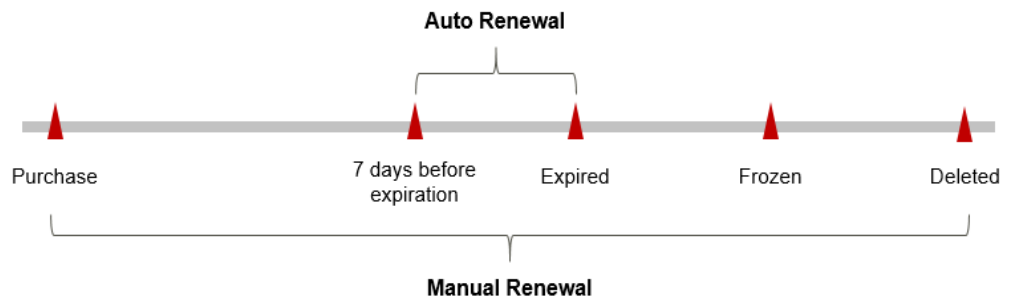
You can renew a yearly/monthly public NAT gateway manually or automatically.

Table 6-1 Renewing a yearly/monthly public NAT gateway

Method	Description
Manually renewing a yearly/monthly public NAT gateway	You can renew a yearly/monthly NAT gateway on the console anytime before it is automatically deleted.
Automatically renewing a yearly/monthly public NAT gateway	You can enable auto-renewal to automatically renew the public NAT gateway before it expires. This prevents resources from being deleted in case you forget to renew a subscription.

You can select a method to renew a yearly/monthly public NAT gateway based on the phase the public NAT gateway is currently in.

Figure 6-1 Selecting a renewal method based on public NAT gateway's phase



- A NAT gateway is in the **Running** state after it is provisioned.
- When a NAT gateway subscription expires, the status will change from **Running** to **Expired**.
- If an expired NAT gateway is not renewed, it enters a grace period. If it is not renewed by the time the grace period expires, the NAT gateway will be frozen and enter a retention period.
- If you do not renew the subscription before the retention period expires, your resources will be automatically deleted.

NOTE


For details about the grace period and 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?](#)

You can enable auto-renewal anytime before a NAT gateway expires. By default, the system will make the first attempt to charge your account for the renewal at 03:00 seven days before the expiry date. If this attempt fails, it will make another attempt at 03:00 every day until the subscription is renewed or expires. You can change the auto-payment date for renewal as required.

6.2 Manually Renewing a NAT Gateway

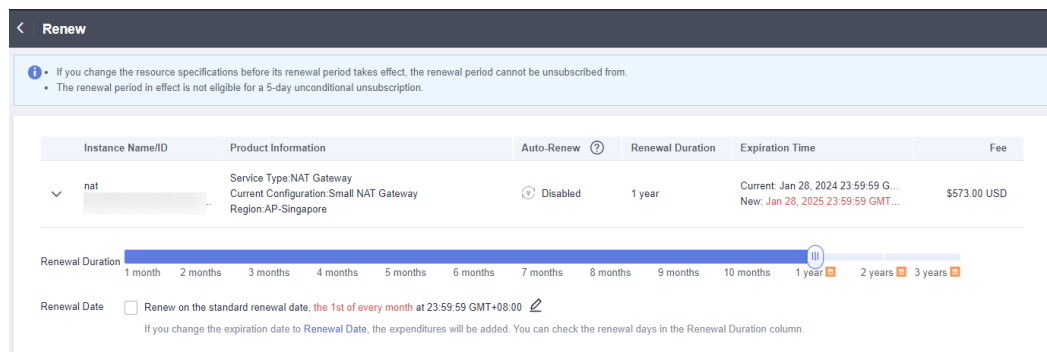
You can renew a yearly/monthly NAT gateway on the console anytime before it is automatically deleted.

Renewing a NAT Gateway on the Console

- Step 1** Log in to the management console.
- Step 2** Click  in the upper left corner and choose **Networking > NAT Gateway**.
- Step 3** In the NAT gateway list, select the yearly/monthly NAT gateway you want to renew.

- Step 4** Choose **More > Renew** in the **Operation** column.
- Step 5** On the **Renew** page, confirm the information and click **Yes**.
- Step 6** Select a renewal duration and optionally select **Renew on the standard renewal date**. For details, see [Setting the Same Renewal Day for Yearly/Monthly Resources](#). Confirm the price and click **Pay**.

Figure 6-2 Confirming renewal



- Step 7** Select a payment method and confirm the payment. After you pay the order, the renewal is complete.

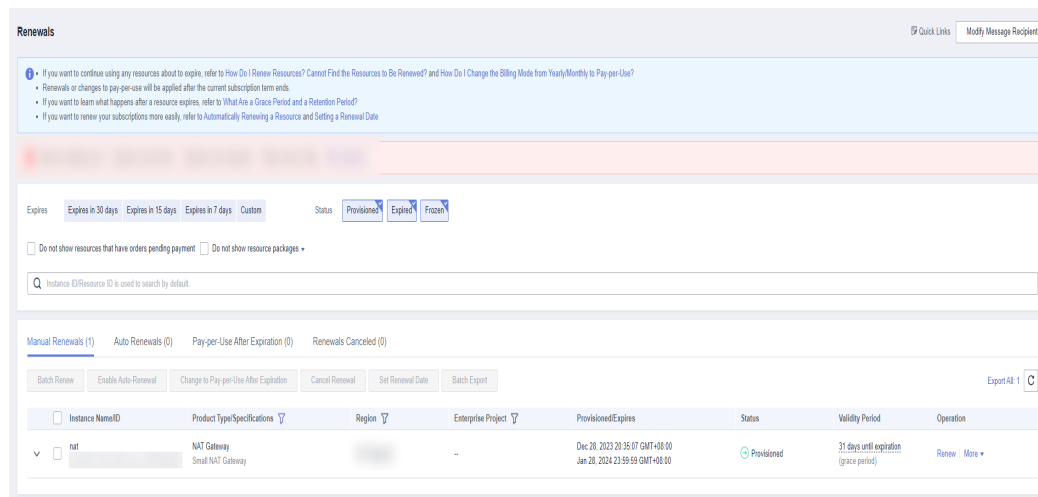
----End

Renewing a Subscription in Billing Center

- Step 1** Log in to the management console.
- Step 2** Hover over **Billing & Costs** in the upper part of the console and choose **Renewal** from the drop-down list.
The **Renewals** page is displayed.
- Step 3** Set the search criteria.

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

Figure 6-3 Renewal management

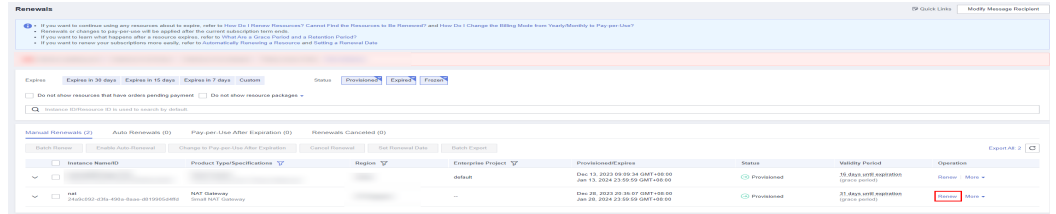


You can move all resources that need to be manually renewed to the **Manual Renewals** tab. For details, see [Restoring to Manual Renewal](#).

Step 4 Manually renew resources.

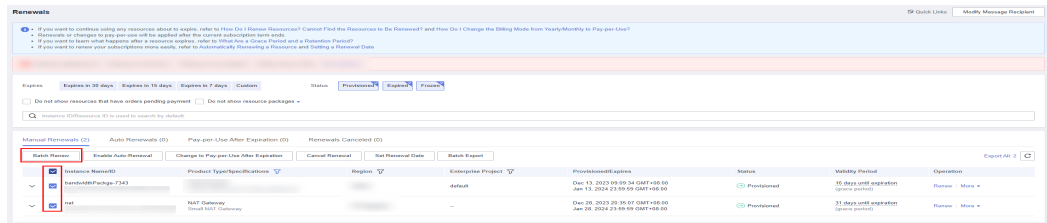
- Separate renewal: Click **Renew** in the **Operation** column for the desired resource.

Figure 6-4 Individual renewal



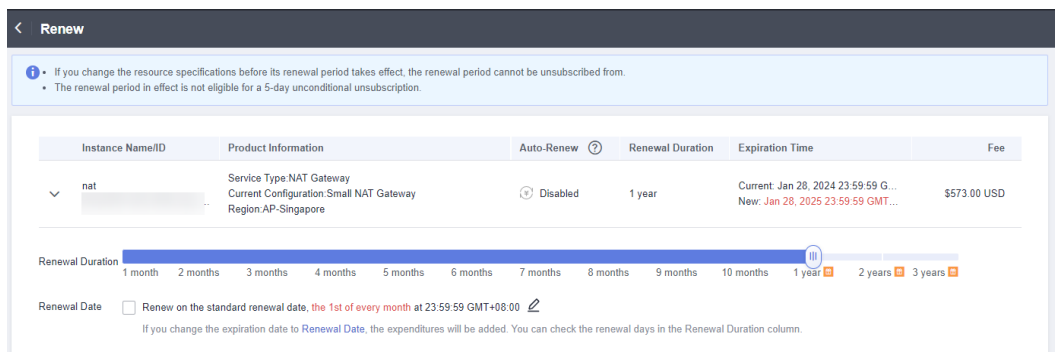
- Batch renewal: Check the boxes for the desired resources, and click **Batch Renew** in the upper left corner.

Figure 6-5 Batch renewal



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

Figure 6-6 Confirming renewal



Step 6 Select a payment method and confirm the payment. After you pay the order, the renewal is complete.

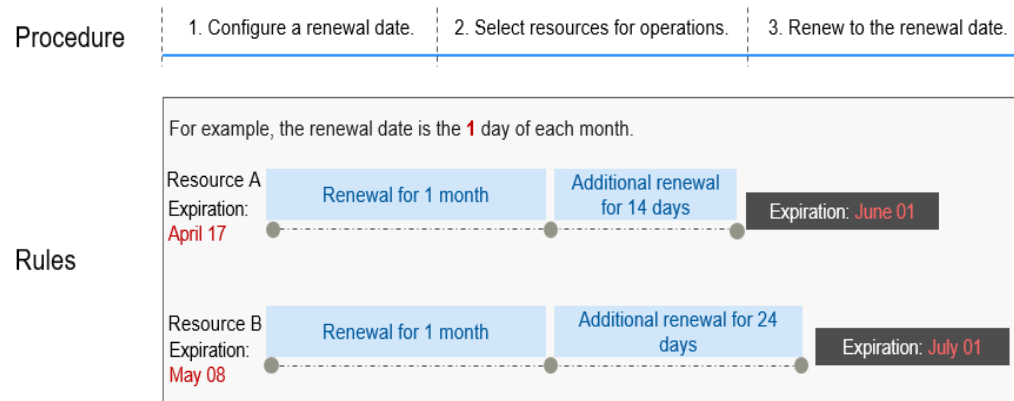
----End

Setting the Same Renewal Day for Yearly/Monthly Resources

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

In [Figure 6-7](#), a user sets the same renewal day for two resources that will expire at different dates.

Figure 6-7 Setting the same renewal day for resources with different expiry dates



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

6.3 Auto-renewing a NAT Gateway

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

- The first auto-renewal date is based on when a NAT gateway expires and the billing cycle.
- The auto-renewal period of a NAT gateway depends on the subscription term. Monthly subscriptions renew each month, and yearly subscriptions renew each year.
- You can enable auto-renewal anytime before a NAT gateway expires. By default, the system will make the first attempt to charge your account for the renewal at 03:00 seven days before the expiry date. If this attempt fails, it will make another attempt at 03:00 every day until the subscription is renewed or expires.
- After auto-renewal is enabled, you can still renew the NAT gateway manually if you want to. After a manual renewal is complete, auto-renewal is still valid, and the renewal fee will be deducted from your account seven days before the new expiry date.
- By default, the renewal fee is deducted from your account seven days before the new expiry date. You can change this auto-renewal payment date as required.
- For more information about auto-renewal rules, see [Auto-Renewal Rules](#).

Prerequisites

The yearly/monthly public NAT gateway is not expired.

You can enable auto-renewal in either of the following ways:

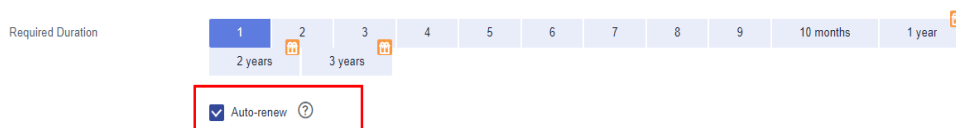
- [Auto-renewal has been enabled during the purchase.](#)

- [Enabling Auto-Renewal on the Renewals Page](#)

Auto-renewal has been enabled during the purchase.

You can enable auto-renewal on the NAT Gateway purchase page, as shown in [Figure 6-8](#). For details, see [Buying a Public NAT Gateway](#).

Figure 6-8 Enabling auto-renewal



Enabling Auto-Renewal on the Renewals Page

Step 1 Log in to the management console.

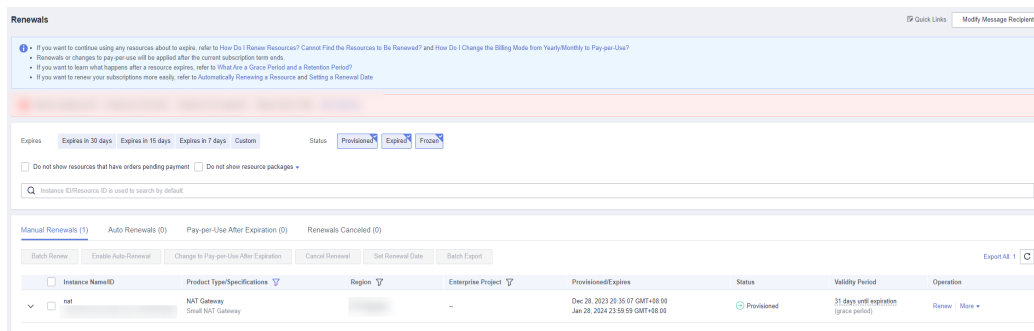
Step 2 Hover over **Billing & Costs** in the upper part of the console and choose **Renewal** from the drop-down list.

The **Renewals** page is displayed.

Step 3 Set the search criteria.

- On the **Auto Renewals** page, you can view 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.

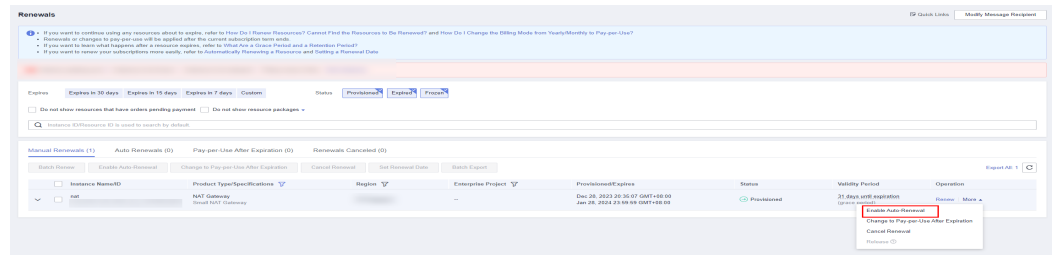
Figure 6-9 Renewals



Step 4 Enable auto-renewal for yearly/monthly resources.

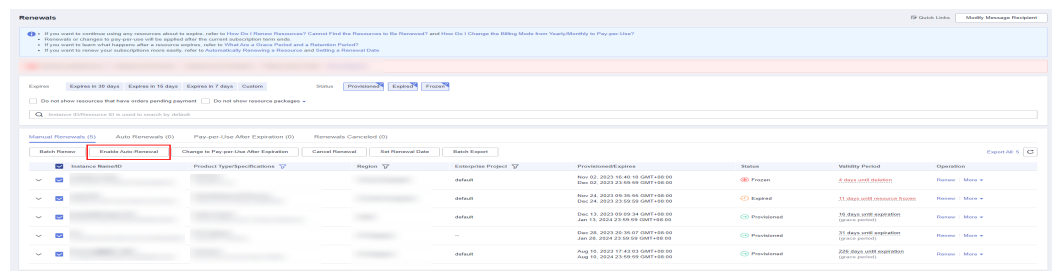
- Enabling auto-renewal for a single resource: Select the NAT gateway for which you want to enable auto-renewal and click **Enable Auto-Renew** in the **Operation** column.

Figure 6-10 Enabling auto-renewal for a single resource



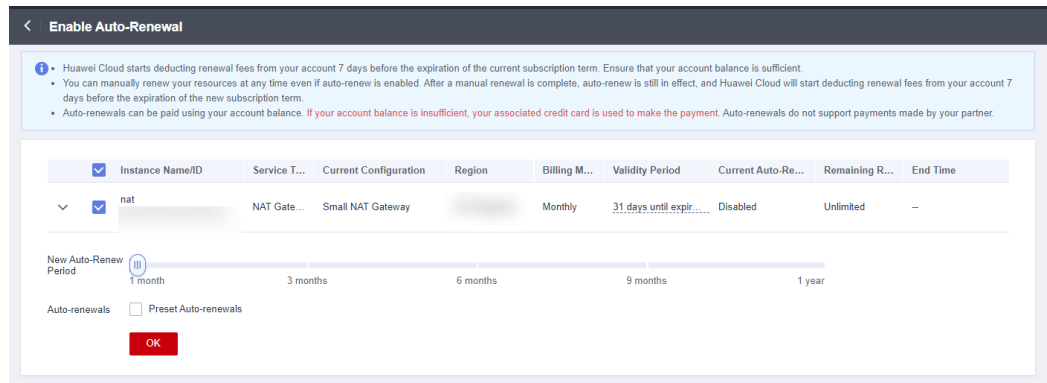
- Enabling auto-renewal for multiple resources at a time: Select the NAT gateways for which you want to enable auto-renewal and click **Enable Auto-Renew** above the list.

Figure 6-11 Enabling auto-renewal for multiple resources



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

Figure 6-12 Enabling auto-renewal



----End

7 Bills

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

Billing Generation

A pay-per-use resource is billed by the hour, day, or month, depending on the resource's usage type. The NAT gateway usage is billed by the day or hour. For details, see [Bill Run for Pay-per-Use Resources](#).

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

Viewing Bills of a Specific Resource

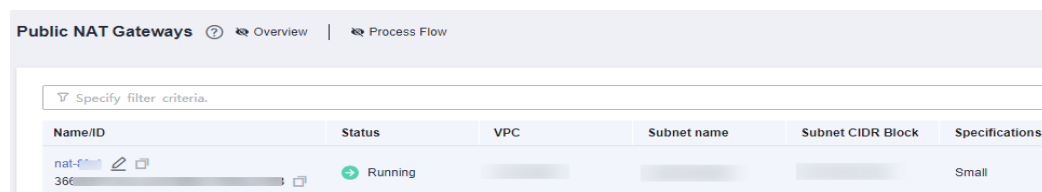
[Example 1: Use the resource ID to search for a bill. The resource ID is the same as the resource ID in the bill.]

Step 1 Log in to the management console and choose **Networking > NAT Gateway**.

The NAT gateway list is displayed.


Step 2 Click the icon shown in the figure below to copy the NAT gateway ID.

Figure 7-1 Copying the NAT gateway ID



Step 3 On the top menu bar, choose **Billing & Costs > Bills**.

The **Dashboard** page is displayed.

Step 4 Choose **Expenditure Details**, select **Resource ID** as the filter criteria, paste the obtained NAT gateway ID, and click the  icon.

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

----End

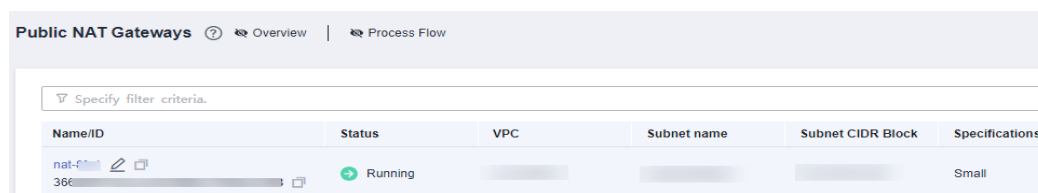
[Example 2: Use the resource name to search for a bill.]

Step 1 Choose **Networking > NAT Gateway**.

The NAT gateway list is displayed.


Step 2 Click the icon shown in the figure below to copy the NAT gateway name.

Figure 7-2 Copying the NAT gateway name



Step 3 On the top menu bar, choose **Billing & Costs > Bills**.

The **Dashboard** page is displayed.

Step 4 Choose **Billing > Expenditure Details**, select **Resource Name** as the filter criteria, paste the obtained NAT gateway name, and click the  icon.

For details, see [Bills](#).

----End

Checking the Consistency of the Actual Usage and Billed Usage

Suppose you purchased a small, pay-per-use private NAT gateway on April 08, 2023, 10:09:06 and deleted it on April 08, 2023, 12:09:06.

- Transaction Records

Pay-per-use private NAT gateway usage is calculated by the second but billed on an hourly basis. You can check the transaction records against the actual usage. For details, see [Table 7-1](#).

Table 7-1 NAT gateway transaction records

Service Type	NAT Gateway
Resource Type	Private NAT gateway
Billing Mode	Pay-per-use

Expenditure Time	<p>For the period of time from 10:09:06 to 12:09:06 on April 08, 2023, three transaction records would be generated for the resource usage in the following periods:</p> <ul style="list-style-type: none"> • April 08, 2023, 10:09:06 to April 08, 2023, 11:00:00 • April 08, 2023, 11:00:00 to April 08, 2023, 12:00:00 • April 08, 2023, 12:00:00 to April 08, 2023, 12:09:06
List Price	<p>List price on the official website = Usage x Unit price</p> <p>The private NAT gateway was used for 3,054 seconds in the first period, and the unit price can be obtained on the NAT Gateway Pricing Details page. The list price for the first period = $(3054 \div 3600) \times 0.1 = 0.08483333$ USD. Similarly, you can calculate the NAT gateway list price for the other periods.</p>
Discounted Amount	<p>Discounts offered for cloud services, for example, commercial discounts, partner authorized discounts, and promotional discounts. It is the discounted amount based on the list price.</p>
Truncated Amount	<p>Huawei Cloud billing is calculated to the 8th decimal place. However, the amount due is truncated to the 2nd decimal place. The third and later decimal places are referred to as the truncated amounts.</p> <p>Take the first usage period as an example. The truncated amount is \$0.00483333 USD.</p>
Amount Due	<p>Amount due = List price - Discount amount - Truncated amount</p> <p>Take the first period as an example. If the discount amount is 0, the amount due is \$0.08 USD ($0.08483333 - 0 - 0.00483333$).</p>

8 Arrears

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

Arrears Reason

Your account falls into arrears anytime your configured payment method is unable to pay for the used resources on the pay-per-use basis.

Arrears Impact

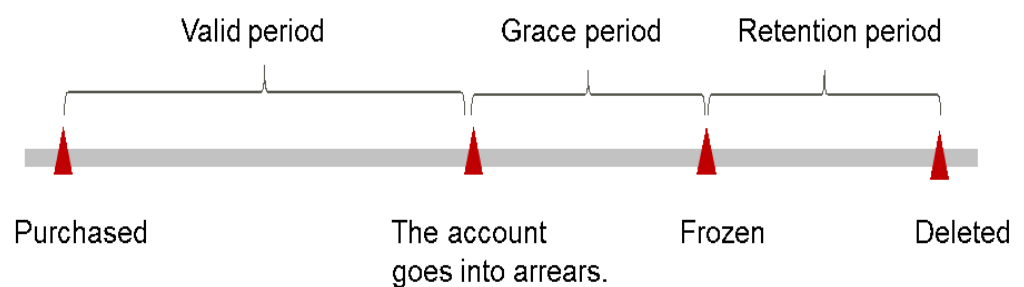
- Pay-per-use

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

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

After the retention period ends, the NAT gateways will be released and cannot be restored.

Figure 8-1 Lifecycle of a pay-per-use NAT gateway



 NOTE

For details about the grace period and 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

- Make sure you have a valid payment method configured as soon as possible after your account is in arrears. For details, see [Topping Up an Account \(Prepaid Direct Customers\)](#).
- To help make sure your account never falls into arrears, you can configure the **Balance Alert** on the **Overview** page of the Billing Center. Then, anytime an expenditure quota drops to below the threshold you specify, Huawei Cloud automatically notifies you by SMS or email.
- If your account is in arrears, address the issue in a timely manner.

9 Billing Termination

Pay-per-Use Resources

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

Searching for Resources from Bills and Stopping Billing

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

[Example 1: Use the resource ID in the bill to search for the resource.]

Step 1 On the top menu bar, choose **Billing & Costs > Bills**.

The **Dashboard** page is displayed.

Step 2 Click the icon shown in the following figure to copy the resource ID.

Step 3 Choose **Networking > NAT Gateway**.

The NAT gateway list is displayed.


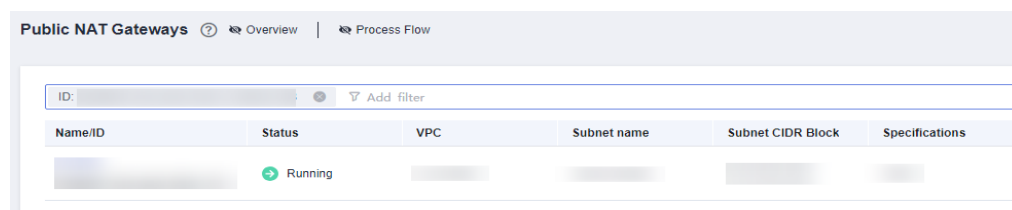
Step 4 Select the region where the NAT gateway is located, select **ID** from the filter criteria, paste the resource ID copied in **Step 2**, and click the  icon to search for the resource.

Figure 9-1 Searching for the NAT gateway



Step 5 Choose **More > Delete** in the **Operation** column to delete the NAT gateway. Ensure that the NAT gateway does not exist in the list.

NOTE

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

----End

[Example 2: Use the resource name in the bill to search for the resource.]

Step 1 On the top menu bar, choose **Billing & Costs > Bills**.

The **Dashboard** page is displayed.

Step 2 Click the icon shown in the following figure to copy the resource name.

Step 3 Choose **Networking > NAT Gateway**.

The NAT gateway list is displayed.


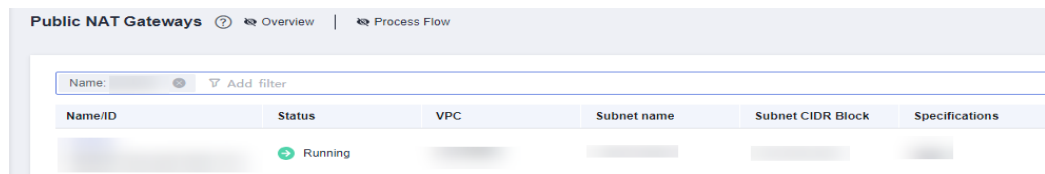
Step 4 Select the region where the resource is located, select **Name** from the filter criteria, paste the resource name copied in **Step 2**, and click the  icon to search for the resource.

Figure 9-2 Search for resources



Step 5 Choose **More > Delete** in the **Operation** column to delete the NAT gateway. Ensure that the NAT gateway does not exist in the list.

NOTE

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

----End

10 Cost Management

As you migrate more of your services to the cloud, managing cloud costs becomes more important. For example, you may be more concerned with cost management when using NAT gateways. The following describes how to manage costs in terms of cost composition, allocation, analysis, and optimization. Optimizing costs can help you maximize return on investment.

Cost Composition

NAT Gateway costs consist of costs of resources and resource packages, depending on the billing items of NAT gateways. For details, see [Billing Items](#).

Huawei Cloud [Cost Center](#) helps you manage resource costs with ease.

Cost Allocation

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

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

- **By linked account**

The enterprise master account can manage costs by grouping the costs of its member accounts by linked account. For details, see [Viewing Costs by Linked Account](#).
- **By enterprise project**

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

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

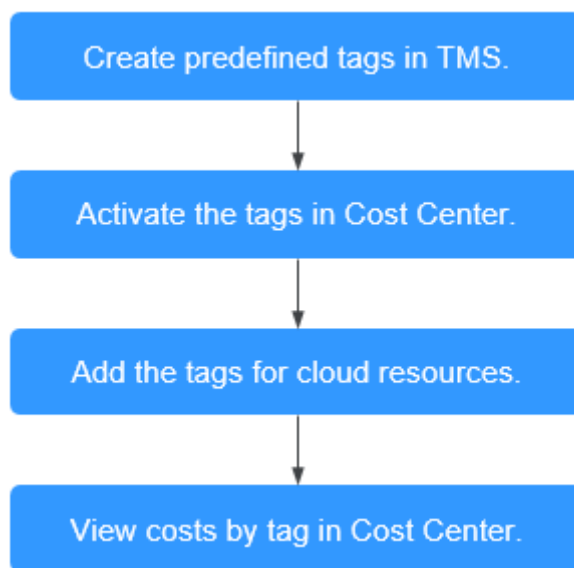
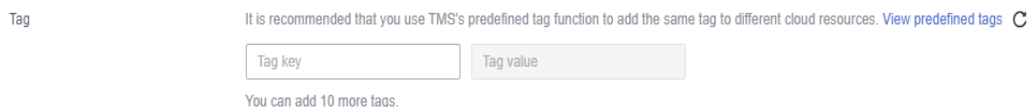


Figure 10-1 Adding tags to a NAT gateway



For details, see [Viewing Costs by Cost Tag](#).

– **By cost category**

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

Cost Analysis

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

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

For details, see [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. If the budget thresholds you defined are reached, Cost Center will send alerts to the recipients you configured. You can also create budget reports and specify recipients to receive budget alerts if any at a frequency you configured.

Suppose you want to create a monthly budget of \$10,000 USD for pay-per-use NAT gateways and expect to receive an alert if the forecasted amount exceeds 80% of the budgeted amount. You can refer to the following budget information.

Figure 10-2 Basic budget information

Budgets / **Create Budget**

① Choose budget type — ② **Set your budget** — ③ (Optional) Configure budget alerts — ④ Confirm budget information

Specify your budget details, including the reset period and budgeted amount. You can also define the budget scope to have your budget monitoring more accurate.

Budget Details

* Budget Name

* Reset Period Budget evaluation begins at 00:00 GMT+08:00 on the 1st day c moving forward.

* Budget Duration

* Start Time

* Allocation

* Budgeted Amount Last month's cost: \$1,434.58 USD
(USD)

Figure 10-3 Defining the budget scope

Service Type	Include	▲
NAT Gateway (NAT) ✕		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 10-4 Setting a budget alert

(Optional) Alert Thresholds

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

[Add threshold](#)

Recipients (Email)

[Select From Contacts](#)

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 [Cost Analysis](#) and take optimization measures accordingly.

- Monitor resource usage and evaluate whether the current configuration is more than you need.
- Identify idle resources.

- **O&M automation**

Huawei Cloud also provides various O&M products to help you improve O&M efficiency and reduce O&M labor costs. The following are examples of such products:

- **Auto Scaling:** You can automatically and continuously maintain instance clusters that use different billing modes, are distributed across AZs, and have different instance specifications. Use this service when there is a clear distinction between peak and off-peak workloads.
- **Auto Launch Group:** In just a few clicks, you can deploy instance clusters that use different billing modes, are distributed across AZs, and have different instance specifications. Use this method when stable computing power needs to be quickly delivered and spot instances need to be used to reduce costs.
- **Resource Formation Service:** Resource stacks with multiple cloud resources and dependencies can be deployed and maintained with just a few clicks. Use this service to deliver the entire system or clone an environment.
- **Application Operations Management:** Groups of O&M operations can be defined as services to make it much easier to execute various O&M tasks. Use this service for scheduled O&M, batch O&M, and cross-region O&M.

11 Billing FAQs

11.1 How Is Private NAT Gateway Billed?

Private NAT gateways are free in some regions for a limited period of time and are billed in some other regions. To learn how private NAT gateways are billed, see [Billing \(Private NAT Gateway\)](#).

NOTE

- Private NAT gateways are free for a limited time in the following regions: CN East-Shanghai², CN-Hong Kong, LA-Sao Paulo¹, AF-Johannesburg, and LA-Mexico City².
- Private NAT gateways are billed in the following regions: CN South-Guangzhou, CN East-Shanghai¹, CN North-Beijing⁴, AP-Bangkok, AP-Singapore, and CN Southwest-Guiyang¹.

11.2 How Many Private NAT Gateways Can I Buy in a VPC?

You can buy a maximum of 10 private NAT gateways in a VPC.