

# Scalable File Service

## Billing

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# 1 Billing Overview

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In this document, you will learn about how SFS file systems are billed, how you can renew subscriptions and manage costs, and what happens if your account goes into arrears. For details, see [Product Pricing Details](#).

- **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 SFS file system for. You will need to make sure you have a top-up account with a sufficient balance or have a valid payment method configured first.

Pay-per-use: You can start using the SFS file system first and then pay as you go.

For details about the two billing modes, see [Overview](#).

You can also change the billing mode later if it no longer meets your needs. For details, see [Overview](#).

- **Billed Items**

SFS includes SFS Capacity-Oriented, General Purpose File System, and SFS Turbo. They all support pay-per-use billing. You will only be billed for the storage capacity of a General Purpose File System, an SFS Capacity-Oriented file system, or an SFS Turbo file system.

For details about the billing factors and formulas for each billed item, see [Billed Items](#).

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

- **Renewing Subscriptions**

After a yearly/monthly SFS file system expires, it cannot be used properly. If you want to continue using an SFS file system after it expires, you need to renew the file system subscription within the specified period. Otherwise, the file system 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 SFS 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 SFS file systems, 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 SFS file system, you can unsubscribe from or delete it to stop the billing. For details, see [Billing Termination](#).
- **Managing Costs**  
You can allocate, analyze, and optimize 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. 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. There are no wasted resources.

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

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

Billing Mode	Yearly/Monthly	Pay-per-Use
Payment	Prepaid	Postpaid
Billing Method	Billed by the subscription term you purchase	Billed by the hour
Billed Items	SFS Turbo (excluding HPC Cache file systems)	SFS Capacity-Oriented and SFS Turbo
Changing the Billing Mode	Yearly/Monthly can be changed to pay-per-use. Pay-per-use billing takes effect only after the yearly/monthly subscription ends. <b>Yearly/Monthly to Pay-per-Use</b>	Pay-per-use can be changed to yearly/monthly. <b>Pay-per-Use to Yearly/Monthly</b>

Changing the File System Type	Not supported	Not supported
Changing the File System Capacity	Supported <ul style="list-style-type: none"> <li>File system capacity cannot be reduced.</li> <li>File system capacity can be expanded, and you need to pay for the price difference. The file system expiration time remains unchanged after an expansion.</li> </ul>	Supported <ul style="list-style-type: none"> <li>File system capacity cannot be reduced.</li> <li>File system capacity can be expanded. Additional capacities are billed on a pay-per-use basis.</li> </ul>
Application Scenarios	Recommended for resources expected to be in use long-term.  A cost-effective option for scenarios where the resource usage duration is predictable.	Recommended when the resource demands are likely to fluctuate and you want more flexibility.

## 2.2 Yearly/Monthly Billing

### Application Scenarios

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

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

### Billed Items

**Table 2-2** SFS Capacity-Oriented billing model

Billed Item	Description
Storage space	Storage space used by the file system

**Table 2-3** SFS Turbo billing model

Billed Item	Billing Factor
SFS Turbo file system	Purchased capacity

## Billed Usage Period

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

For example, if you purchased a one-month SFS file system on March 8, 2023, 15:50:04, the billed usage period was from March 8, 2023, 15:50:04 to April 8, 2023, 23:59:59.

## Billing Examples

Suppose you purchased a one-month subscription of an SFS Turbo General file system (Standard, 500 GiB) on March 8, 2023, 15:50:04, and renewed the subscription for one more month before the initial subscription expired. The following usage periods would be billed:

- March 8, 2023, 15:50:04 to April 8, 2023, 23:59:59
- April 8, 2023, 23:59:59 to May 8, 2023, 23:59:59

You would be billed for both usage periods. In each period, the file system would be billed as follows:

File system price = File system unit price x Capacity x Purchased duration

## Price Change After Specification Change

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

If you upgrade your file system specifications, you need to pay the difference in price.

**Price difference for the specification upgrade = Price for the new specifications × Remaining period - Price for the original specifications × Remaining period**

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

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

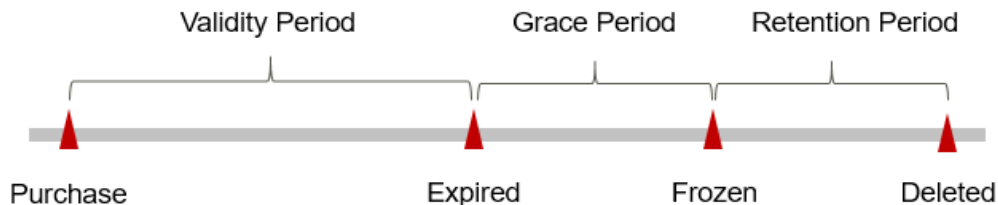
## Impact of Expiration

**Figure 2-1** shows the statuses a yearly/monthly SFS file system can go through throughout its lifecycle. After an SFS file system is purchased, it enters the valid period and works normally during this period. If the file system 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 SFS file system



### Expiration Reminder

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

### Impact of Expiration

If your yearly/monthly SFS file system is not renewed after it expires, it changes to the **Expired** state and enters a grace period. During the grace period, you can access the file system, but cannot perform certain operations.

If the yearly/monthly SFS file system 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 file system while it is in the retention period.

If the yearly/monthly SFS file system is not renewed by the time the retention period ends, the file system 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 renewal, 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. This section describes the billing rules for pay-per-use SFS file systems.

### 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.

### Billed Items

- **SFS Capacity-Oriented and General Purpose File System**

Pay-per-use billing is preset by default. You can purchase an SFS Capacity-Oriented file system for free and pay only for the used storage space based on for how long you use the file system. You will be billed for the file system by the hour, and there is no minimum cost. Any usage period of less than an hour is rounded up to an hour.

**Table 2-4** SFS Capacity-Oriented and General Purpose File System billing model

Billed Item	Description
Storage space	Storage space used by the file system

- **SFS Turbo file systems**

Pay-per-use billing is preset by default. You will be billed for the storage capacity based on for how long you use the SFS Turbo file system. The billing starts right after you create a file system. The file system usage is billed by the hour, and any usage period of less than an hour is rounded up to an hour.

**Table 2-5** SFS Turbo billing model

Billed Item	Billing Factor
SFS Turbo file system	Purchased capacity

## Billed Usage Period

The minimum billed usage period of a file system is an hour regardless of when you purchase it. For example, if you purchased a pay-per-use file system at sometime between 18:00:00 to 19:00:00, the usage period of an hour would be billed (18:00:00 to 19:00:00).

## Billing Formula

Storage price = Unit price per GB x Storage capacity x Usage period

## Billing Examples

Suppose you purchased a 40 MB/s/TiB SFS Turbo file system (500 GB capacity). In a region that charges \$0.45 USD/GB-month, you would be billed \$225 USD (\$0.45 USD/GB-month x 500 GB x 1 month).

## Price Change After Specification Change

If you change the specifications of a pay-per-use SFS file system, the original order will become invalid and a new order will be placed. You will be billed based on the new specifications.

If you change file system specifications within a given hour, multiple records will be generated. Different records record the billing for different specifications.

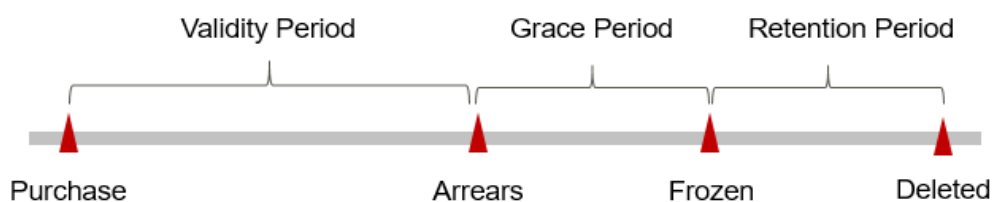
For example, if you purchased a pay-per-use, 40 MB/s/TiB SFS Turbo file system (500 GB capacity) at 09:00:00 and expanded the file system capacity to 600 GB at 09:30:00, the following items would be billed:

- 500 GB file system from 09:00:00 to 09:30:00
- 600 GB file system from 09:30:00 to 10:00:00

## Impact of Arrears

**Figure 2-2** shows the statuses a pay-per-use SFS file system can have throughout its lifecycle. After an SFS file system is created, it enters the valid period and works normally during this period. If your account goes into arrears, the file system enters a grace period and then a retention period.

**Figure 2-2** Life cycle of a pay-per-use SFS file system



### Arrears Reminder

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

### Arrears Impact

If your account is insufficient to pay your amount due, your account goes into arrears, and your pay-per-use file systems enter a grace period. You are still responsible for expenditures generated during the grace period. You can view the charges on the **Billing & Costs > 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 file systems turn to **Frozen** and enter a retention period. You cannot perform any operations on pay-per-use file systems in the **Frozen** status.

If you do not bring your account balance current before the retention period ends, the file systems 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 [Making Repayments \(Postpaid Direct Customers\)](#).

## 2.4 Resource Packages

SFS offers yearly/monthly resource packages for you to save money. You can purchase resource packages based on your data volume and for how long you

want to store data in your file system. Any usage beyond your package will be billed on a pay-per-use basis. For how to purchase resource packages, see [Yearly/Monthly Subscription](#).

SFS resource packages cannot be unsubscribed from, so it is recommended that you purchase resource packages based on the data volume and validity period you require.

Resource packages cannot be used across regions. Check your region before purchasing resource packages.

For an SFS Turbo file system, in addition to purchasing a resource package when creating the file system, you can also change to yearly/monthly billing after the file system is created.

## Purchasing a Resource Package

### Procedure for SFS Capacity-Oriented

#### Step 1 Purchase a resource package.

1. Log in to the SFS console, go to the resource management page, and click **Buy Storage Package** in the upper right corner.
2. On the displayed page, configure the parameters.  
You can view the pricing standards on [Product Pricing Details](#).
3. Click **Next**.
4. Confirm the order information and click **Submit**.

To modify the order information, click **Previous** and then continue with your purchase.

5. Pay for the order.
6. Return to the SFS console to use SFS.

Resource packages cannot be viewed on the SFS console. To view resource packages, see [How Do I Check the Usage of an SFS Capacity-Oriented Resource Package?](#)

#### NOTE

- An SFS Capacity-Oriented resource package can be used immediately after payment. If the package capacity is greater than the used capacity of the file system, pay-per-use billing stops immediately. The package capacity is preferentially used when you use file systems.
- SFS Capacity-Oriented resource packages cannot be expanded, but can be purchased multiple times. For details, see [Can I Purchase SFS Capacity-Oriented Resource Packages When I Still Have Valid Ones in Use?](#)

For example, if a user purchased a 1 TB SFS Capacity-Oriented resource package for a year and created a 500 GB SFS Capacity-Oriented file system and used all 500 GB, the used capacity of the resource package is 500 GB. For how to view the resource package usage, see [How Do I Check the Usage of an SFS Capacity-Oriented Resource Package?](#) One month later, the user created another 600 GB SFS Capacity-Oriented file system (file system B). Now the purchased 1 TB capacity is used up, and the usage exceeding the package quota (76 GB) is billed on a pay-per-use basis. If you do not want to be billed pay per use, you can purchase more resource packages. For details, see [Purchasing a Resource Package](#).

#### Step 2 Use SFS.

1. Choose **Storage > Scalable File Service** to go to the SFS console.
2. Click **Create File System**. The package capacity is automatically used without any additional configuration. If you have multiple file systems, they can share the same resource package.

----End

#### Procedure for SFS Turbo

**Method 1:** Purchase a yearly/monthly file system. Create a file system and set the billing mode to **Yearly/Monthly**. For details, see [Create a File System](#).

**Method 2:** In the file system list, find the pay-per-use file system you want to change their billing mode, and click **Change to Yearly/Monthly** in the **Operation** column.

## Follow-Up Operations

When a yearly/monthly resource package expires or is used up, the additional usage will be billed on a pay-per-use basis. To ensure the proper use of your file system, check your account balance regularly. To continue using the yearly/monthly resource package, renew the resource package. For details, see [Overview](#).

For resource package usage FAQs, see [Billing FAQ](#).

# 3 Billed Items

SFS includes SFS Capacity-Oriented, General Purpose File System, and SFS Turbo. They all support pay-per-use billing. You will only be billed for the storage capacity of a General Purpose File System, an SFS Capacity-Oriented file system, or an SFS Turbo file system.

**Table 3-1** SFS Capacity-Oriented billing model

Category	Billed Item	Description	Billing Formula	Billing Mode
Storage	Storage space	Billed based on the used capacity and usage period of the file system	Storage price = Unit price per GB x Used capacity x Usage period	Pay-per-use Yearly/ Monthly

**Table 3-2** General Purpose File System billing model

Category	Billed Item	Description	Billing Formula	Billing Mode
Storage	Storage space	Billed based on the used capacity and usage period of the file system	Storage price = Unit price per GB x Used capacity x Usage period	Pay-per-use Yearly/ Monthly

**Table 3-3** SFS Turbo billing model

<b>Applicable Type</b>	<b>Category</b>	<b>Billed Item</b>	<b>Description</b>	<b>Billing Formula</b>	<b>Billing Mode</b>
Standard, Standard - Enhanced, Performance, Performance - Enhanced, 20 MB/s/TiB, 40 MB/s/TiB, 125 MB/s/TiB, 250 MB/s/TiB, 500 MB/s/TiB, 1,000 MB/s/TiB	Storage	Purchased capacity	Billed based on the purchased capacity and usage period of the file system	Storage price = Unit price per GB x Purchased capacity x Usage period	Pay-per-use Yearly/ Monthly

# 4 Billing Examples

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## Billing Scenario

A user purchased a pay-per-use file system at 15:00:00 on March 18, 2023. The file system specifications are as follows:

- Type: SFS Turbo, 40 MB/s/TiB
- Capacity: 100 GB

After a period of time, the user found that the current file system specifications no longer met service requirements and expanded the file system capacity to 200 GB at 15:00:00 on March 20, 2023. Since the user wanted to use the file system long term, the user then changed the file system to yearly/monthly billing with a one-month duration at 16:00:00 on March 20, 2023. So how much will the user be billed for this file system in March and April?

## Billing Analysis

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

- Pay-per-use usage: March 18, 2023, 15:00:00 to March 20, 2023, 16:00:00
- Yearly/monthly usage: March 20, 2023, 16:00:00 to April 20, 2023, 23:59:59

### Pay-per-use

- From March 18, 2023, 15:00:00 to March 20, 2023, 15:00:00, the file system capacity was 100 GB and the file system was used for 48 hours, so the price would be \$3.02 USD ( $\$0.45 \text{ USD/GB-month} \times 100 \text{ GB} \times 48 \text{ hours}$ ).
- From March 20, 2023, 15:00:00 to March 20, 2023, 16:00:00, the file system capacity was 200 GB and the file system was used for an hour, so the price would be \$0.13 USD ( $\$0.45 \text{ USD/GB-month} \times 200 \text{ GB} \times 1 \text{ hour}$ ).

### Yearly/Monthly

From March 20, 2023, 16:00:00 to April 20, 2023, 23:59:59, the file system was used with yearly/monthly billing for a month, so the price would be calculated as follows:

$\$0.45 \text{ USD/GB-month} \times 200 \text{ GB} \times 1 \text{ month} = \$90 \text{ USD}$



From March to April, the total price of this file system would be \$93.15 USD (3.02 + 0.13 + 90).

# 5 Billing Mode Changes

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## 5.1 Overview

SFS supports both pay-per-use and yearly/monthly billing as well as resource packages. You can change to yearly/monthly billing if pay-per-use billing no longer meets your needs. For the changeable billed items, see [Billed Items](#).

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

If you have a pay-per-use file system 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.

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

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



### Prerequisites

- The file system billing mode is pay-per-use
- The file system status is **Available**.

### Procedure

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

1. Log in to the management console.

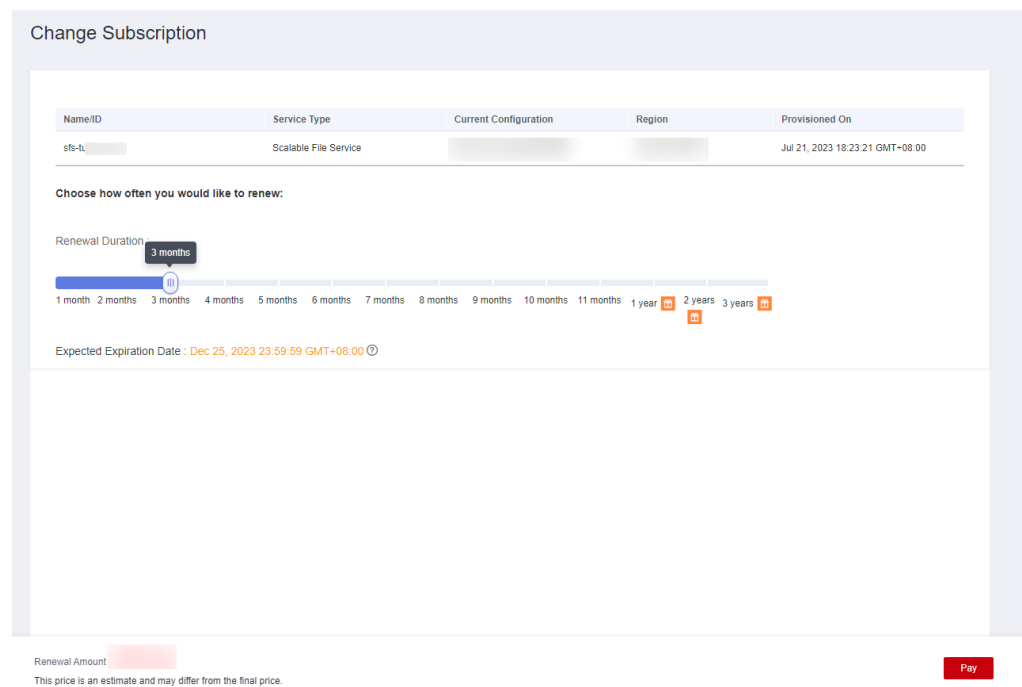
2. Click  in the upper left corner and select a region.
3. Click  in the navigation tree and choose **Storage > Scalable File Service**.

**Step 2** In the file system list, find the file system you want to change the billing mode.

**Step 3** In the **Operation** column, choose **More > Change to Yearly/Monthly**.

**Step 4** On the **Change Subscription** page, select the usage duration, confirm the expected expiration time and price, and click **Pay**.

**Figure 5-1** Changing to yearly/monthly



**Step 5** Select a payment method and make your payment. Once the order is paid, yearly/monthly billing is applied.

----End

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

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

### NOTE

Pay-per-use billing will be applied only after the yearly/monthly billing duration ends.

## Limitations and Constraints

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

## Prerequisites

The billing mode can only be changed from yearly/monthly to pay-per-use for file systems whose order status is **Provisioned**.

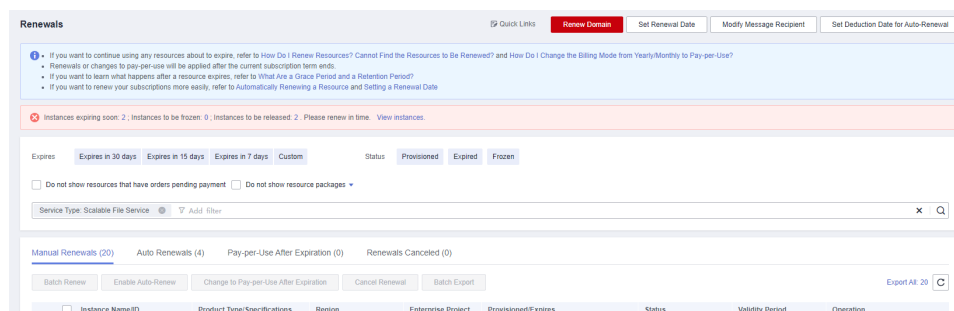
## Procedure

- 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 change 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.

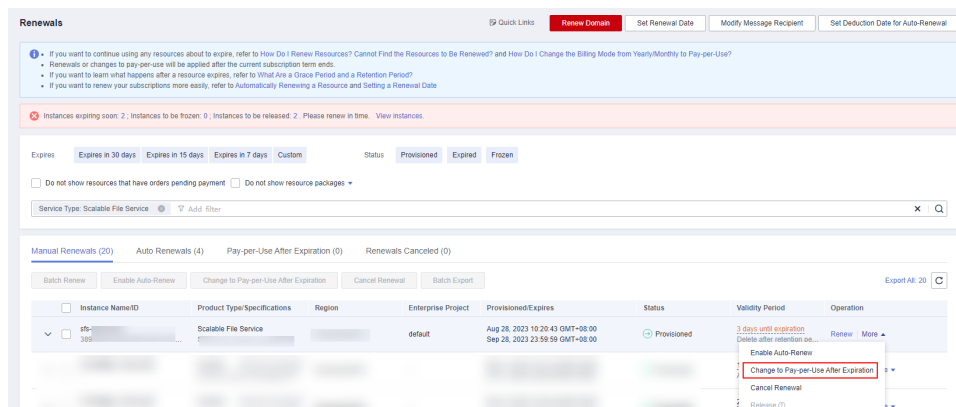
**Figure 5-2 Renewals**



- Step 4** Change yearly/monthly resources to pay-per-use billing upon expiration.

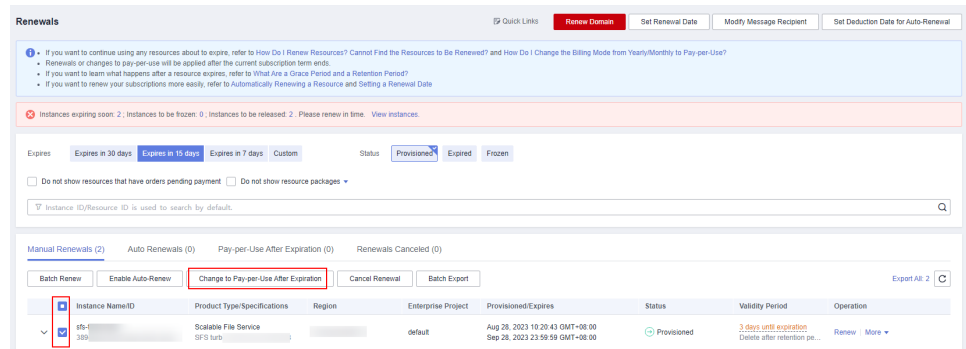
- Single resource: Select the file system you want to change the billing mode and choose **More > Change to Pay-per-Use After Expiration** in the **Operation** column.

**Figure 5-3 Changing to pay-per-use billing upon expiration for a single resource**



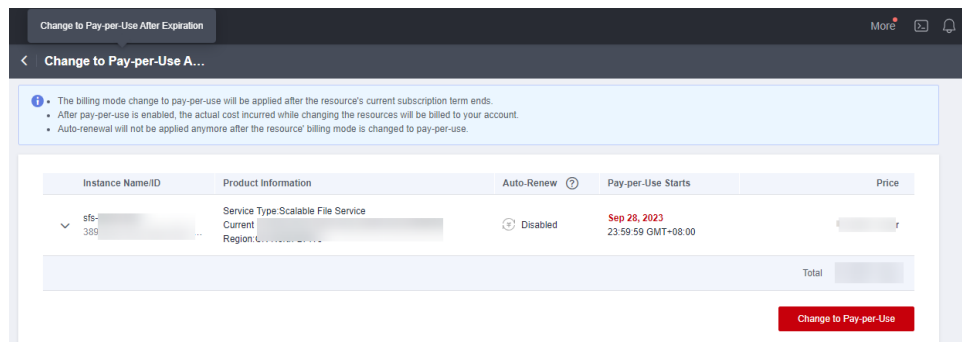
- Multiple resources: Select the file systems you want to change their billing modes and click **Change to Pay-per-Use After Expiration** above the file system list.

**Figure 5-4** Changing to pay-per-use billing upon expiration for multiple resources



**Step 5** Confirm the change details and click **Change to Pay-per-Use**.

**Figure 5-5** Changing to pay-per-use billing upon expiration



----End

# 6 Renewing Subscriptions

## 6.1 Overview

### When to Renew Subscriptions

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

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

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

### How to Renew Subscriptions

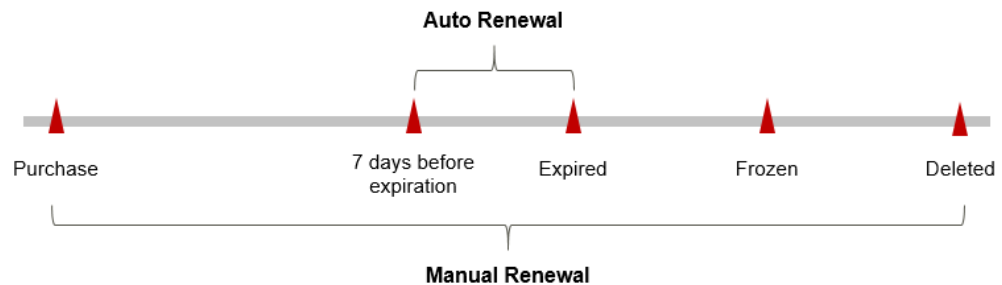
You can renew a yearly/monthly SFS file system manually or automatically.

**Table 6-1** Renewing a yearly/monthly SFS file system

Method	Description
<a href="#">Manually Renewing a File System</a>	You can renew a yearly/monthly SFS file system anytime on the console before it is automatically deleted.
<a href="#">Auto-renewing a File System</a>	You can enable auto-renewal to automatically renew an SFS file system 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 SFS file system based on the phase the file system is currently in.

**Figure 6-1** Selecting a renewal method based on file system's current phase



- A file system is in the **Available** status after it is provisioned.
- When a file system subscription expires, the file system status will change to **Expired**.
- If an expired file system is not renewed, it enters a grace period. If it is not renewed by the time the grace period expires, the file system 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 any time before a file system 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 expired. You can change the auto-payment date for renewal as required.

## 6.2 Manually Renewing a File System

You can renew a yearly/monthly SFS file system anytime on the console before it is automatically deleted.

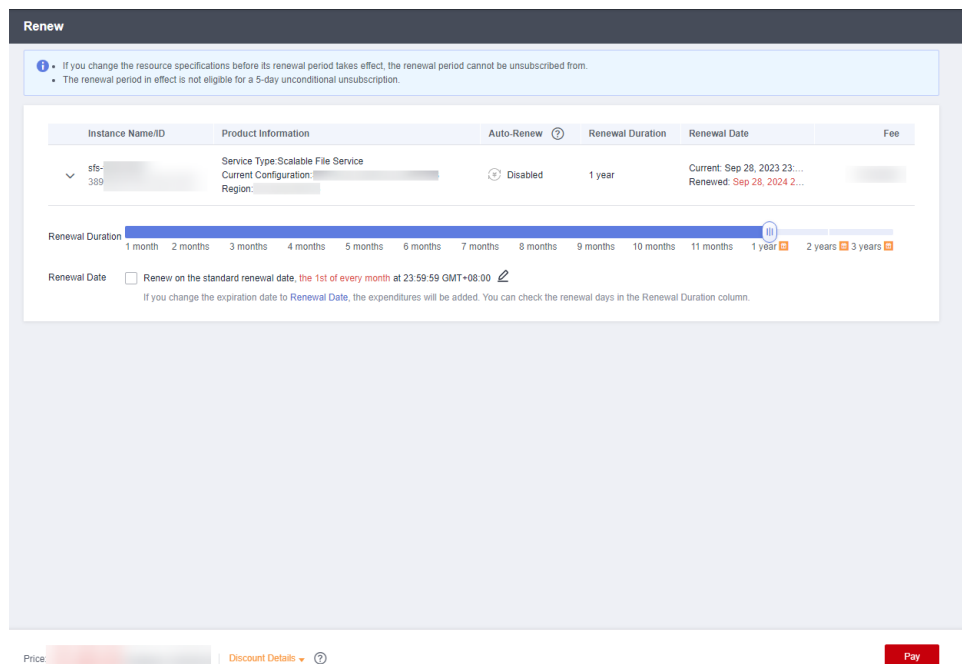
### Renewing a File System on the Console

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

1. Log in to the management console.
2. Click  in the upper left corner and select a region.
3. Click  in the navigation page, choose **Storage > Scalable File Service**, and select SFS Capacity-Oriented or SFS Turbo.

- Step 2** In the file system list, find the yearly/monthly file system to be renewed.
- Step 3** Choose **More > Renew** in the **Operation** column.
- Step 4** 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 5** Select a payment method and make your payment. Once the order is paid for, the renewal is complete.

----End

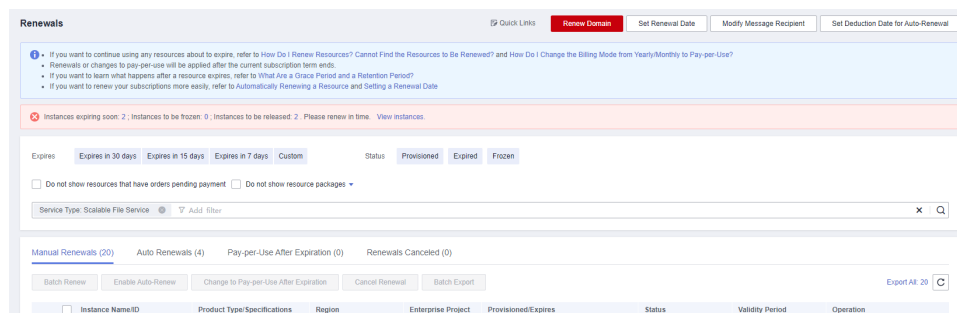
## Renewing a Subscription in the Billing Center

- 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** tab pages, you can view the resources to be renewed.



Figure 6-3 Renewals

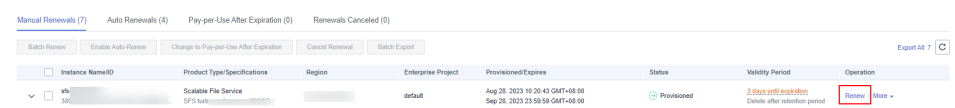


You can move all resources that need to be manually renewed to the **Manual Renewals** tab page. For details, see [Restoring to Manual Renewal](#).

**Step 4** Manually renew resources.

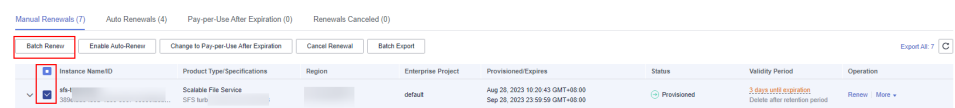
- Individual renewal: Click **Renew** in the **Operation** column for the desired resource.

Figure 6-4 Individual renewal



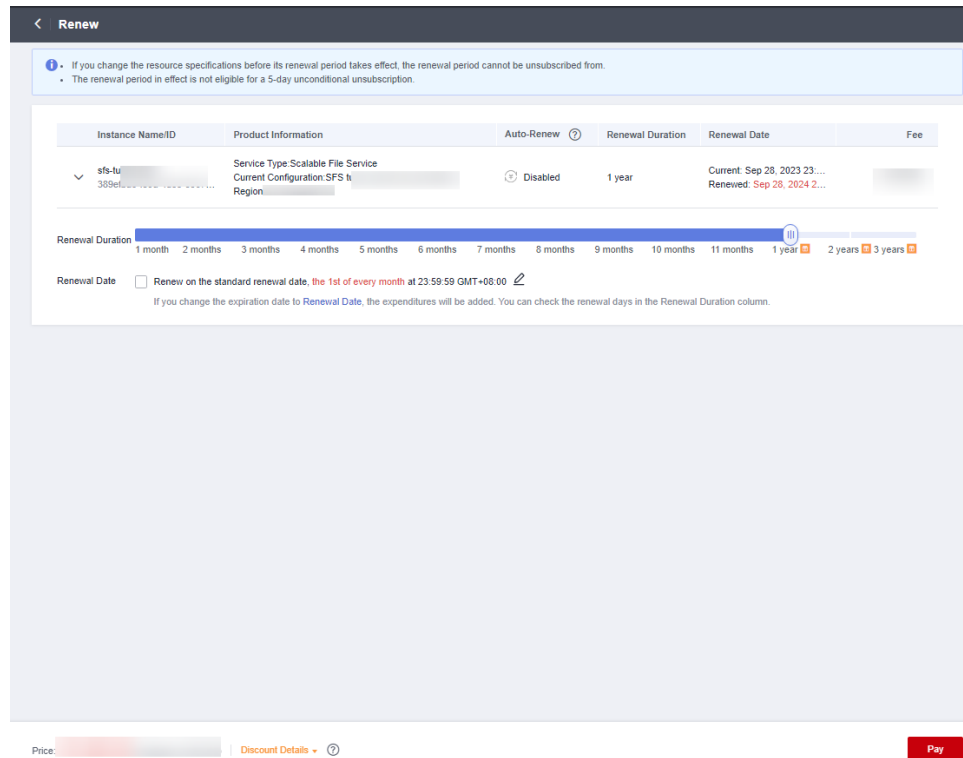
- Batch renewal: Check the boxes for the desired resources, and click **Batch Renew** in the upper left corner.

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 make your payment. Once the order is paid for, the renewal is complete.

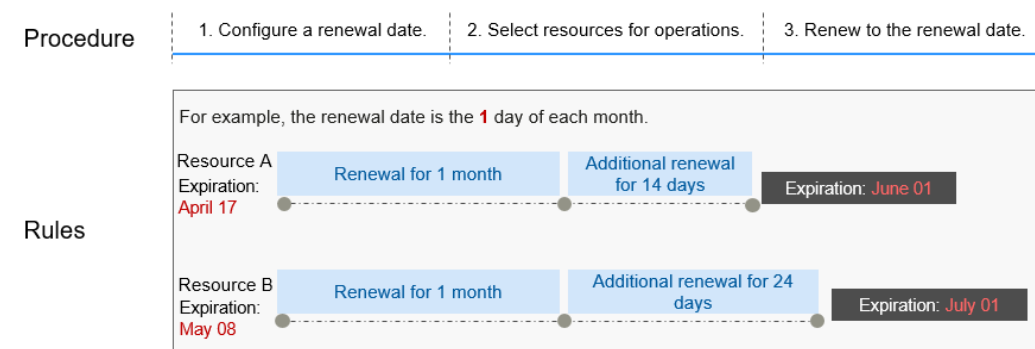
----End

## Setting the Same Renewal Day for Yearly/Monthly Resources

If the file systems 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 File System

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

- The first auto-renewal date is based on when the file system expires and the billing cycle.
- The auto-renewal period of a file system depends on the subscription term. For example, if you select a three-month renewal period, the file system subscription will be renewed for three months each time before expiry.
- You can enable auto-renewal any time before a file system 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 expired.
- After auto-renewal is enabled, you can still renew the file system manually if you want to. After a manual renewal is complete, auto-renewal is still valid, and the renewal charge will be deducted from your account seven days before the new expiry date.
- By default, the renewal charge 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](#).

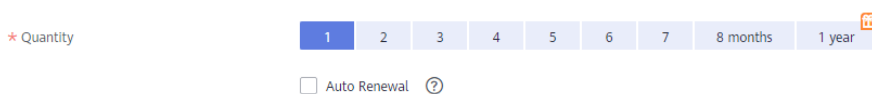
### Prerequisites

The yearly/monthly file system is not expired.

### Enabling Auto-Renewal During Purchase

You can enable auto-renewal on the file system creation page, as shown in [Figure 6-8](#).

**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.

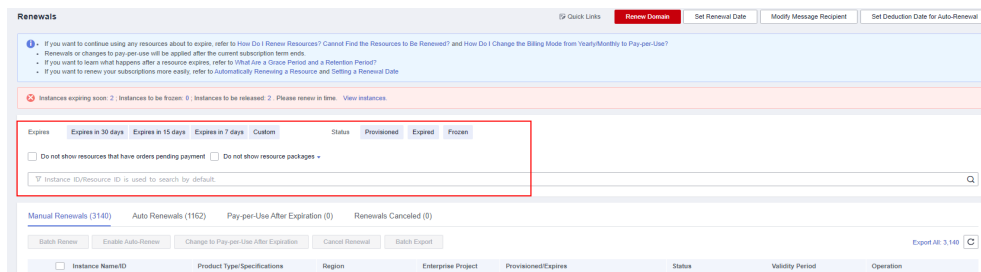
The **Renewals** page is displayed.

**Step 3** Set the search criteria.

- You can view the resources for which auto-renewal has been enabled on the **Auto Renewals** page.

- You can enable auto-renewal for resources on the **Manual Renewals**, **Pay-per-Use After Expiration**, and **Renewals Canceled** pages.

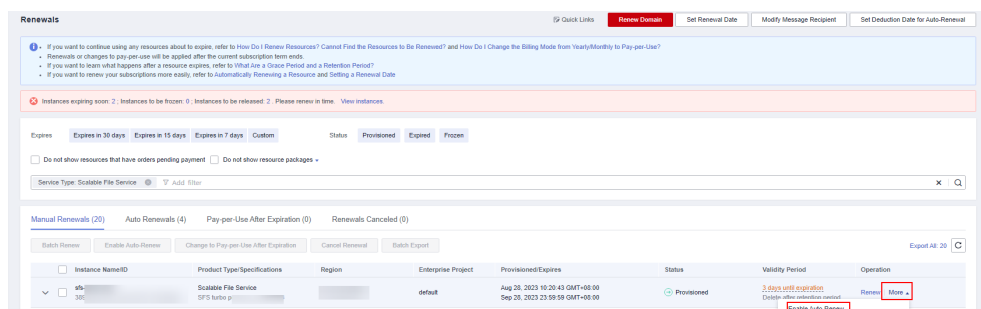
Figure 6-9 Renewals



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

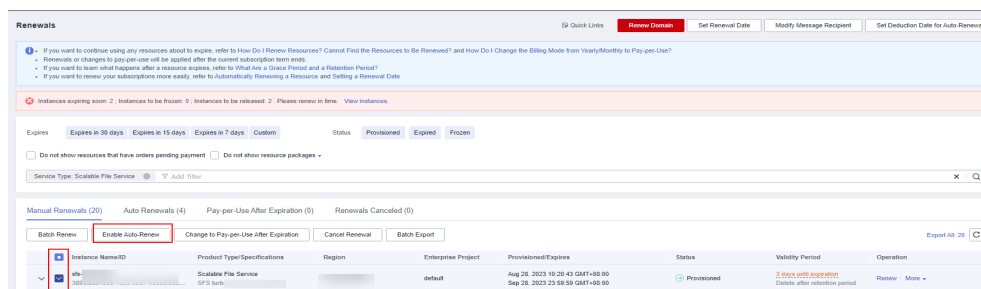
- Enabling auto-renewal for a single resource: Select the file system for which you want to enable auto-renewal and choose **More > Enable Auto-Renew** in the **Operation** column.

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



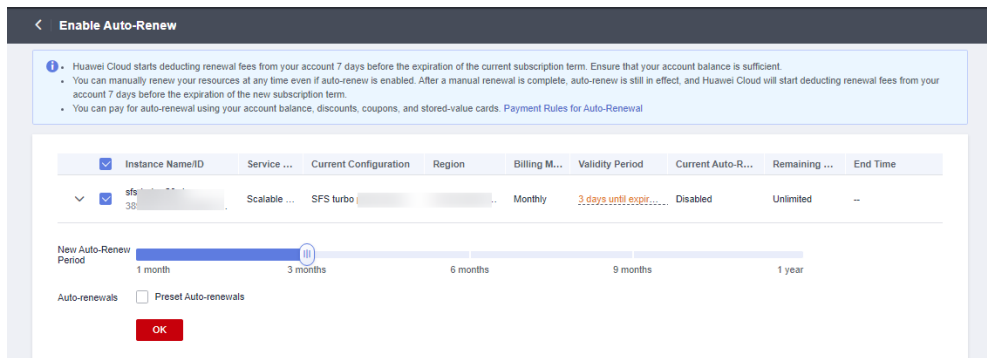
- Enabling auto-renewal for multiple resources at a time: Select the file systems for which you want to enable auto-renewal and click **Enable Auto-Renew** above the list.

Figure 6-11 Enabling auto-renewal for multiple resources



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

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.

## Bill Generation

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

Pay-per-use resources are billed by the hour, day, or month, depending on their usage types. The file system usage is billed by the hour. For details, see [Bill Run for Pay-per-Use Resources](#).

You are not charged immediately after a record is generated. For example, if a pay-per-use file system (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 likely 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

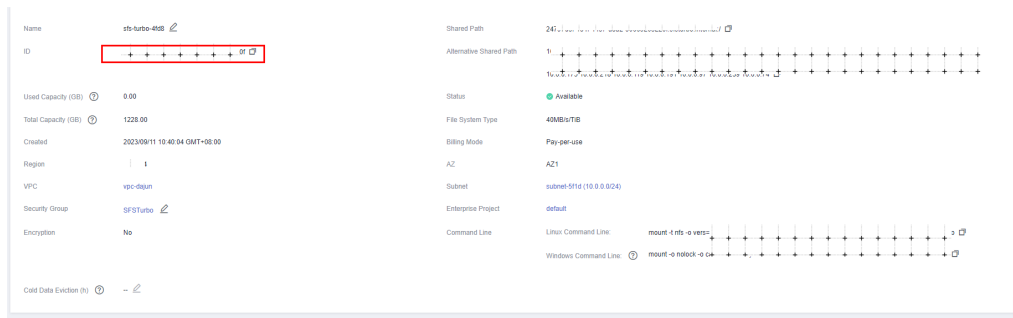
**Use the SFS file system ID to search for a bill.**

**Step 1** Log in to the management console and choose **Storage > Scalable File Service**.

The file system list is displayed.

**Step 2** Click the name of a file system to go to its details page. Click the icon shown in the figure below to copy the file system ID.

Figure 7-1 Copying the file system ID



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

The **Dashboard** page is displayed.


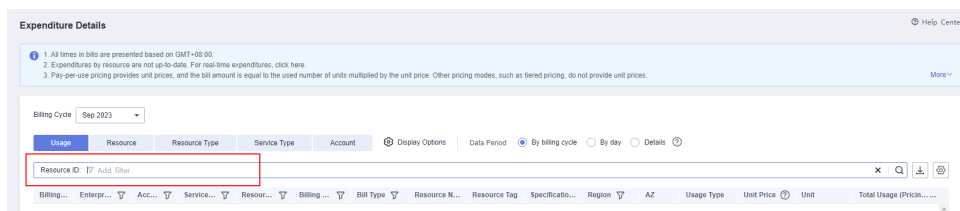
**Step 4** Choose **Billing > Expenditure Details**, select **Resource ID** as the filter criteria, enter the copied file system ID, and click the  icon.

Figure 7-2 Searching for a bill



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

----End

# 8 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 SFS file systems, you will need to top up your account in a timely manner.

## Arrears Reason

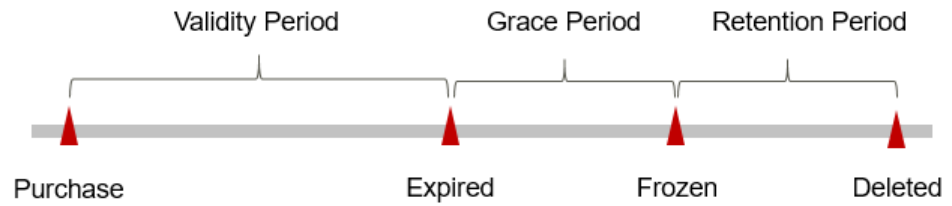
You have pay-per-use SFS file systems running for some time, and your configured payment method or top-up account cannot pay for your bill.

## Arrears Impact

- **Yearly/Monthly**  
This is a pre-paid billing mode, so you can continue using yearly/monthly SFS file systems even if your account is in arrears. However, you cannot perform operations such as purchasing new SFS file systems, expanding the file system capacity, or renewing file systems, because they will generate new expenditures.
- **Pay-per-Use**  
If your account is insufficient to pay your amount due, your account goes into arrears, and your pay-per-use file systems enter a grace period. You are still responsible for expenditures generated during the grace period. You can view the charges on the **Billing & Costs > 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 file systems turn to **Frozen** and enter a retention period. You cannot perform any operations on pay-per-use file systems in the **Frozen** status.  
  
If you do not bring your account balance current before the retention period ends, the file systems will be released and the data cannot be restored.



**Figure 8-1** Life cycle of a pay-per-use SFS file system



**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 \(Prepaid Direct Customers\)](#).

If data stored in SFS file systems is no longer used, you can delete them to avoid generating further expenditures.

# 9 Billing Termination

---

## Yearly/Monthly Resources

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

- If you no longer need a resource, but the subscription has not yet expired, you can unsubscribe from it. Depending on what coupons were used for the purchase and on if 5-day unconditional unsubscription rules apply, Huawei Cloud may issue you a refund. For details about unsubscription rules, see [Unsubscriptions](#).
- If you have enabled auto-renewal but no longer wish to automatically renew the subscription, disable it before the auto-renewal date (7 days before the expiration date by default) to avoid unexpected expenditures.

## Pay-per-Use Resources

If pay-per-use resources, such as pay-per-use SFS file systems, are no longer used, 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.

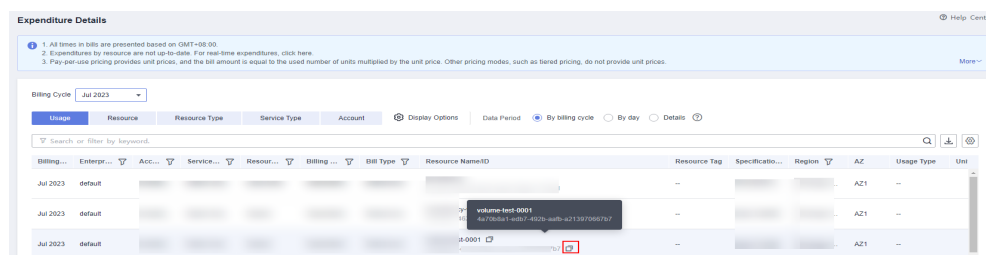
**Use the resource ID in the bill to search for the resource.**

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

The page is displayed.


**Step 2** On the **Expenditure Details** page, click the icon shown in the following figure to copy the resource ID.

**Figure 9-1** Copying the resource ID



**Step 3** Choose **Storage > Scalable File Service**.

The file system list is displayed.

**Step 4** Select the region where the resource is located, select **ID** and enter the copied resource ID. Click the  icon to search for the resource.

**Figure 9-2** Searching for the resource



**Step 5** Choose **More > Delete** in the **Operation** column to delete the file system and check that the file system no longer appears 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 file system (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 SFS. 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

SFS costs consist of two parts:

- Resource costs: cost of resources and resource packages, depending on the billed items of SFS. For details, see [Billed Items](#).
- O&M costs: labor costs incurred during the use of SFS.

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

## Cost Allocation

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

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

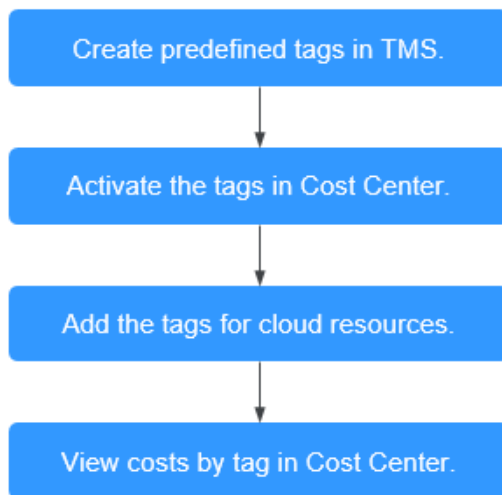
- **By linked account**  
The enterprise master account can manage costs by grouping the costs of its member accounts by linked account. For details, see [Viewing Costs by Linked Account](#).
- **By enterprise project**  
Before allocating costs, enable Enterprise Project Management Service (EPS) and plan your enterprise projects based on your organizational structure or service needs. When purchasing cloud resources, select an enterprise project so that the costs of the resources will be allocated to the selected enterprise project. For details, see [Viewing Costs by Enterprise Project](#).

**Figure 10-1** Selecting an enterprise project for a file system

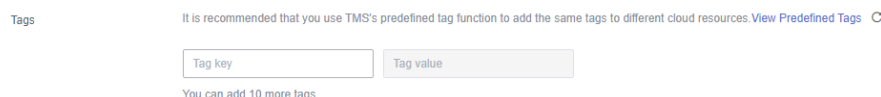


- **By cost tag**

You can 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 10-2** Adding tags for a file system



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 \$2,000 USD for pay-per-use file systems 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 10-3** Basic 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:  Daily  **Monthly**  Quarterly  Yearly Budget evaluation begins at 00:00 GMT+08:00 on the 1st day of the start month and will be reset to zero at 00:00 GMT+08:00 on the 1st day of each month moving forward.
- \* Budget Duration:  **Recurring**  Expiring
- \* Start Time:
- \* Allocation:  **Fixed**  Monthly  Dynamic
- \* Budgeted Amount (¥):  Last month's cost: ¥1,446.46

**Figure 10-4** Defining the budget scope

Service Type	Include	▲
Scalable File Service (SFS) ✕		1
Linked Account	All	▼
Region	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	▼

Show Less

**Figure 10-5** Setting a budget alert

(Optional) Alert Thresholds

Thresholds    Alerts are sent when the actual cost is higher than 80% of the forecasted cost.

[Add threshold](#)

Recipients

[Select From Contacts](#)

For details, see [Enabling Forecasting and Creating Budgets to Track Costs and Usage](#).

- **Resource rightsizing**

You can also identify resources with high costs based on the analyses on the [Cost Analysis](#) page and use Cloud Eye to monitor resource usage. By doing this, you can determine the causes of high costs and take optimization measures accordingly. You can:

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

- **Billing mode selection**

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

- For mature services that tend to be stable for the long term, select the yearly/monthly billing.
- For short-term, unpredictable services that experience traffic bursts and cannot afford to be interrupted, select the pay-per-use billing.



# 11 Billing FAQ

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## 11.1 How Do I Purchase SFS?

SFS uses pay-per-use billing by default, which means that you are billed by the storage capacity you select during purchase and the duration of use. You can also purchase a yearly or monthly package based on how much space you require and for how long you will use the resources. In case of arrears, you need to renew the service within 15 days, or data in your file systems will be cleared.

 **NOTE**

The size of a resource package is irrelevant to the compute throughput of the file system.

### Pay-per-use

**Step 1** Register an account.

1. Visit the Huawei Cloud website at [www.huaweicloud.com/intl/en-us/](http://www.huaweicloud.com/intl/en-us/).
2. In the upper right corner of the page, click **Register**.
3. Complete the registration as instructed.

**Step 2** Top up your account.

1. Log in to the management console.
2. Click **Top Up** and the top-up page is displayed.
3. Top up the account as prompted.
4. After the top-up is complete, close the dialog box and go back to the management console homepage.

**Step 3** Use SFS.

1. Choose **Storage > Scalable File Service** to go to the SFS console.
2. Click **Create File System**. You do not need to select a billing mode for an SFS Capacity-Oriented file system. Use the file system after it is created.

 **NOTE**

- The SFS Capacity-Oriented file system is billed by the used storage capacity and duration of use.
- The SFS Turbo file system is billed by the storage capacity you select during purchase and the duration of use.

----End

## Yearly/Monthly Subscription

You can purchase an SFS Capacity-Oriented or General Purpose File System resource package by clicking **Buy Storage Package**. Resource packages cannot be used across regions. Check your region before purchasing a resource package.

For an SFS Turbo file system, in addition to purchasing a resource package when creating the file system, you can also change to yearly/monthly billing after the file system is created.

SFS Capacity-Oriented file systems and General Purpose File Systems can share a resource package.

### Procedure for SFS Capacity-Oriented and General Purpose File System

#### Step 1 Purchase resource packages.

1. In the upper right corner of the SFS console, click **Buy Storage Package**.
2. On the displayed page, configure the parameters.  
You can view the pricing standards on [Product Pricing Details](#).
3. Click **Next**.
4. Confirm the order information and click **Submit**.

To modify the order information, click **Previous** and then continue with your purchase.

5. Pay for the order.
6. Return to the SFS console to use SFS.

Resource packages cannot be viewed on the SFS console. To view resource packages, see [How Do I Check the Usage of an SFS Capacity-Oriented Resource Package?](#).

 **NOTE**

An SFS Capacity-Oriented or a General Purpose File System resource package can be used immediately after payment. If the package capacity is greater than the used capacity of the file system, pay-per-use billing stops immediately. The package capacity is preferentially used when you use file systems.

SFS Capacity-Oriented and General Purpose File System resource packages cannot be expanded, but can be purchased multiple times. For details, see [Can I Purchase SFS Capacity-Oriented Resource Packages When I Still Have Valid Ones in Use?](#)

For example, if a user purchased a 1 TB SFS Capacity-Oriented or General Purpose File System resource package for a year and created a 500 GB SFS Capacity-Oriented file system and used all 500 GB, the used capacity of the resource package is 500 GB. For how to view the resource package usage, see [How Do I Check the Usage of an SFS Capacity-Oriented Resource Package?](#) One month later, the user created another 600 GB SFS Capacity-Oriented file system (file system B). Now the purchased 1 TB capacity is used up, and the usage exceeding the package quota (76 GB) is billed on a pay-per-use basis. If you do not want to be billed pay per use, you can purchase more resource packages. For details, see [Yearly/Monthly Subscription](#).

**Step 2** Use SFS.

1. Choose **Storage > Scalable File Service** to go to the SFS console.
2. Click **Create File System**. The package capacity is automatically used without any additional configuration. If you have multiple file systems, they can share the same resource package.

----End

**Procedure for SFS Turbo**

**Method 1:** Purchase a yearly/monthly file system. Create a file system and set the billing mode to **Yearly/Monthly**. For details, see [Create a File System](#).

**Method 2:** In the file system list, find the pay-per-use file system you want to change their billing mode, and click **Change to Yearly/Monthly** in the **Operation** column.

## 11.2 How Do I Renew the Service?

If the arrears are not paid in time, your account may be frozen and your order may be canceled.

**Procedure**

- Step 1** Log in to the management console.
- Step 2** In the upper right corner of the page, choose **Billing & Costs > Renewal**.
- Step 3** On the **Renewals** page, click **Renew** in the **Operation** column for the desired resource.
- Step 4** Pay for the order as prompted.

 NOTE

- After the payment, the system automatically pays the arrears.
- For more information about renewal, including auto-renewal, exporting the renewal list, and changing subscriptions, see [Renewal Management](#).
- For more information about orders, unsubscription, coupons, and consumption details, see the [Billing Center User Guide](#).

----End

## 11.3 How Do I Check Whether the Subscriber Is in Arrears?

You can view the outstanding amount on the **Billing Center** page. If your account is in arrears, the system processes resources and fees in SFS according to the retention period rules. For more information, see [Service Suspension and Resource Release](#). To prevent service suspension and resource release, repay arrears or top up in time.

### Procedure

- Step 1** Log in to the management console.
- Step 2** In the upper right corner of the page, click **Billing & Costs** to go to the Billing Center.
- Step 3** On the **Overview** page, you can view the outstanding amount of the current account.
- Step 4** Top up your account to pay arrears if any.

----End

 NOTE

- For details about how to repay the outstanding amount, see [Making Repayments](#).
- For more information about orders, unsubscription, coupons, and consumption details, see the [Billing Center User Guide](#).

## 11.4 Can I Purchase SFS Capacity-Oriented Resource Packages When I Still Have Valid Ones in Use?

You can still purchase resource packages on top of the valid packages. The capacity of the resource package purchased first is used up first.

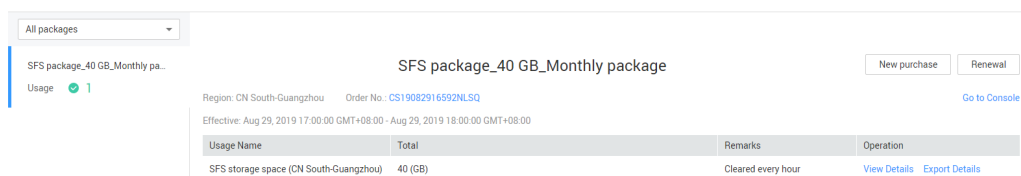
For example: A subscriber has file data of 1.2 TB. The subscriber purchases the resource package A with the capacity of 1 TB on August 15 and the resource package B with the capacity of 1 TB on August 20. Then, from August 20 to September 15, the capacity of the resource package A (1 TB) is used up, and the capacity used in the resource package B is 0.2 TB. The resource package A expires on September 15. If the resource package A is not renewed, the capacity of the resource package B (1 TB) is used up from September 15 to September 20.

## 11.5 How Do I Check the Usage of an SFS Capacity-Oriented Resource Package?

### Procedure

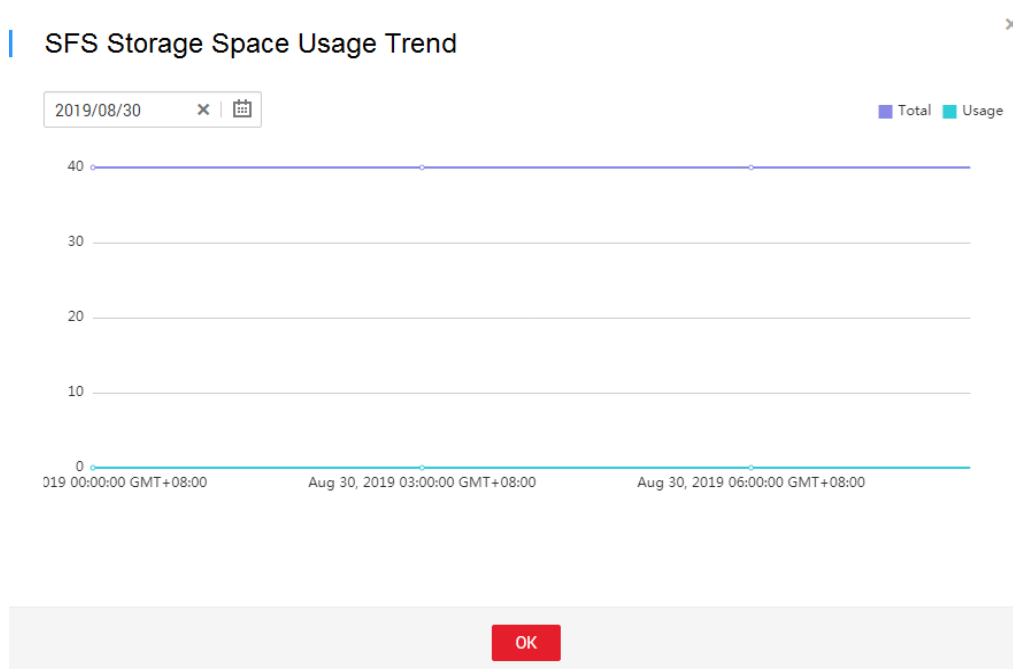
- Step 1** Log in to the SFS console.
- Step 2** In the upper right corner of the page, choose **Billing & Costs > My Packages**.
- Step 3** Information of the purchased resource packages is displayed in the list. Click the target resource package. Then click **View Details** in the **Operation** column to view the usage of the resource package. See [Figure 11-1](#).

**Figure 11-1** Viewing resource package usage



- Step 4** View the resource package usage. See [Figure 11-2](#).

**Figure 11-2** Usage of a resource package



----End

## 11.6 How Do I Adjust the Size of an SFS Capacity-Oriented Resource Package?

If your package capacity is not enough, purchase a new package. The capacity in the old package is preferentially used.

The capacity of a purchased resource package cannot be decreased, so if your package capacity is too much for you, unsubscribe from the package and then purchase a smaller one.

Alternatively, you can use the package until it expires and then purchase a smaller one.

## 11.7 Do SFS Capacity-Oriented and SFS Turbo Share One Resource Package?

No.

For an SFS Capacity-Oriented file system, you can purchase a resource package separately by clicking **Buy Storage Package**. Resource packages cannot be used across regions. Check your region before purchasing a resource package.

For an SFS Turbo file system, you can purchase a resource package when creating the file system and change the billing mode from pay-per-use to yearly/monthly as needed. Resource packages cannot be purchased separately.