

**Cloud Search Service**

# **Product Bulletin**

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# 1 Billing Overview

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

- **Billing Modes**

CSS provides two billing modes: yearly/monthly and pay-per-use to meet your requirements in different scenarios. Yearly/Monthly is a prepaid mode. You need to pay first, and will be billed based on the required duration in your order. Ensure that your account balance is sufficient. Pay-per-use is a postpaid billing mode. You pay as you go and just pay for what you use. The cluster usage is calculated by the second but billed every hour. 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](#).

- **Billing Items**

You will be billed for node specifications, node storage, Kibana public network bandwidth, and public network bandwidth. For details about the billing factors and formulas for each billed item, see [Billing Items](#).

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

- **Renewal**

After a yearly/monthly cluster expires, CSS cannot run properly. If you want to continue using CSS after it expires, you need to renew the CSS subscription within the specified period. Otherwise, resources, such as vCPUs, memory, and storage, will be automatically released, and data may be lost. You can renew your subscription manually or automatically. For details, see [Overview](#).

- **Arrears**

Your account goes into arrears when the balance is less than the bill to be settled. 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 CSS resources, you can unsubscribe from or delete them to stop the billing. For details, see [Billing Termination](#).

- **Managing Costs**

You can manage your costs from 4 dimensions: composition, allocation, analysis, and optimization. For details, see [Cost Management](#).

# 2 Billing Modes

## 2.1 Overview

CSS provides two billing modes: yearly/monthly and pay-per-use to meet your requirements in different scenarios.

- 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. This mode is a good option for long-term, stable services.
- Pay-per-use is a postpaid billing mode. You pay as you go and just pay for what you use. The cluster usage is calculated by the second but billed every 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** Billing modes

Billing Mode	Yearly/Monthly	Pay-per-use
Payment Method	Prepaid Billed by the subscription term you purchase	Postpaid Billed by your actual usage duration
Billed Usage Period	Billed by the subscription term you purchase	Billed by second and settled by hour
Billing Item	Node specifications (vCPUs and memory), node storage, and public network bandwidth	Node specifications (vCPUs and memory), node storage, and public network bandwidth

<b>Billing Mode Change</b>	Yearly/Monthly can be changed to pay-per-use. The change takes effect only after the yearly/monthly subscription expires. For details, see <a href="#">From Yearly/Monthly to Pay-per-Use</a> .	Pay-per-use can be changed to yearly/monthly. For details, see <a href="#">From Pay-per-Use to Yearly/Monthly</a> . After you pay for the order, the yearly/monthly resources take effect immediately.
<b>Specifications Change</b>	Supported	Supported
<b>Application Scenarios</b>	This mode is cost-effective and suitable when the duration of resource usage is predictable. This mode is recommended for long-term users.	This mode is ideal when you want more flexibility and control on compute resource.

## 2.2 Yearly/Monthly

In the yearly/monthly billing mode, you pay before using resources. It is suitable if you need stable resources and want lower costs. You can pre-purchase CSS resources at discounted prices. This section describes the billing rules for yearly/monthly CSS clusters.

### 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: For long-term projects, the yearly/monthly billing mode ensures stable resource usage throughout the project period.
- Workloads with predictable traffic bursts, for example, e-commerce promotions or festivals.
- Workloads with high data security requirements

### Billed Items

You are billed for the following items on a yearly/monthly basis.

**Table 2-2** Items billed on a yearly/monthly basis

Billing Item	Description
Node specifications	vCPUs and memory
Node storage	Disk storage type and capacity of the node storage
EIP bandwidth	If you enable public network access or Kibana public network access for a yearly/monthly cluster, the EIP will be billed by bandwidth on a yearly/monthly basis.

If you want to purchase a cluster with 40 GB high I/O nodes and enable Kibana public access, the prices will be displayed on the **Confirm Configuration** page, as shown in [Figure 2-1](#).

**Figure 2-1** Example prices

Resource	Configure
Cluster	Name: css-c612 Version: 7.10.2 Type: elasticsearch Billing Mode: Yearly/Monthly Required Duration: 1 months Auto-renew: No Enterprise Project: default
Node	Node Specifications: ess.spec-4u8g   4 vCPUs   8 GB Node Capacity and Type: 40 GB High I/O
Network	Region: AP-Bangkok AZ: ap-southeast-2a VPC: vpc-default Subnet: subnet-default(192.168.0.0/24) Security Group: Sys-WebServer Security Mode: Enabled HTTPS Access: Enabled Public IP Address: Do not use
VPC Endpoint Service	Disabled
Cluster Snapshot	Disabled
Kibana Public Access	Kibana Public Access: Fully Dynamic BGP   1 Mbit/s Whitelist: --

The price includes:

- Node flavor (including vCPUs and memory)
- Node storage
- Kibana public network bandwidth

## Billed Usage Period

A yearly/monthly cluster 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 cluster 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 one-month cluster on March 08, 2023, 15:50:04, and renewed the subscription for one more month before the initial subscription expired. That would include two usage periods:

- Billed usage period 1: March 08, 2023, 15:50:04 to April 08, 2023, 23:59:59.
- Billed usage period 2: April 08, 2023, 23:59:59 to May 08, 2023, 23:59:59.

You will be billed for both usage periods. CSS resources are billed individually as follows:

**Table 2-3** Formulas for billing yearly/monthly clusters

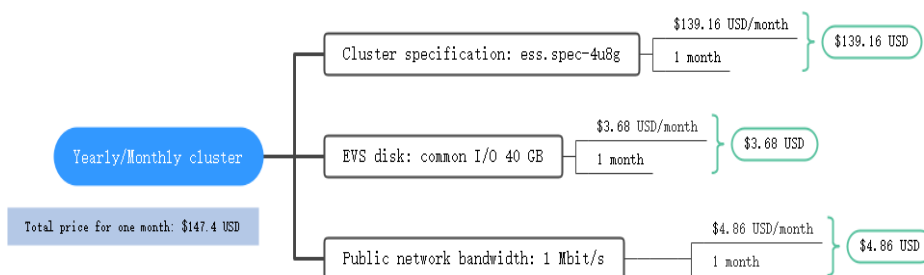
Resource	Formula	Unit Price
Node specifications	Unit price of node flavors x Required duration	For details, see <b>Flavor Price</b> in <a href="#">CSS Pricing Details</a> .
Node storage	Unit price of the node storage x Required duration	For details, see <b>Storage Price</b> in <a href="#">CSS Pricing Details</a> .
EIP bandwidth	Tiered pricing based on fixed bandwidth. <ul style="list-style-type: none"> <li>• 0 Mbit/s to 5 Mbit/s (included): billed at a fixed unit price per Mbit/s</li> <li>• Greater than 5 Mbit/s: billed at a different price per Mbit/s</li> </ul>	For details, see <b>Bandwidth Price</b> in <a href="#">CSS Pricing Details</a> .

Figure 2-2 shows the billing calculation.

### NOTICE

The prices in the figure are examples only. The actual prices are those displayed on [CSS Pricing Details](#).

**Figure 2-2** Total price for a yearly/monthly cluster



## Price Change After Specification Change

If the specifications of a yearly/monthly cluster 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 cluster specifications, you need to pay the difference in price.
- If you downgrade your cluster specifications, Huawei Cloud will refund you the difference.

You are not advised to downgrade your cluster to a lower specification because cluster performance may be affected. Suppose you purchased a one-month cluster `ess.spec-4u8g` (4 vCPU and 8 GiB) on April 8, 2023 and upgraded the specifications to `ess.spec-8u16g` (8 vCPU and 16 GiB) on April 18, 2023. The price of the old configuration is \$136.08 USD/month. The price of the new configuration is \$272.3 USD/month. The price difference will be calculated as follows:

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

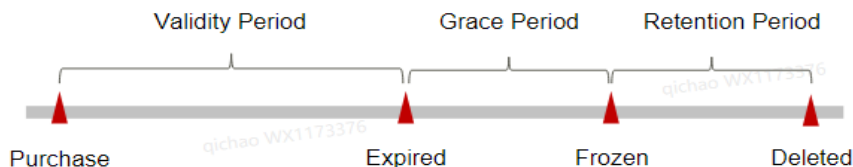
The remaining period in the formula is the remaining days of each calendar month divided by the maximum days of the corresponding calendar month. In this example, Remaining period = 12 (Remaining days in April)/30 (Maximum days in April) + 8 (Remaining days in May)/31 (Maximum days in May) = 0.66, the upgrade fee is calculated as follows: 272.3 × 0.6581 - 136.08 × 0.6581 = \$89.65 USD.

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

## Impact After Expiration

[Figure 2-3](#) shows the statuses a yearly/monthly cluster can go through throughout its lifecycle. After a cluster is purchased, it enters the valid period and runs normally during this period. If the cluster is not renewed after it expires, before being deleted, it first enters a grace period and then a retention period.

**Figure 2-3** Lifecycle of a yearly/monthly cluster



### Expiration Reminder

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

### Impact of Expiration

If your yearly/monthly cluster 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 cluster but cannot:

- Change node specifications
- Scale out node Storage
- Change the bandwidth size

If the yearly/monthly cluster 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 cluster while it is in the retention period.

If the yearly/monthly cluster is not renewed by the time the retention period ends, the compute resources (vCPUs and memory), EVS disks, and EIPs will be released and data cannot be restored.

 **NOTE**

For details about renewals, see [Overview](#).

## 2.3 Pay-per-Use

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

### Application Scenarios

Pay-per-use billing is good for short-term, bursty, or unpredictable workloads that cannot tolerate any interruptions.

### Billing Items

A CSS cluster consists of compute resources (vCPUs and memory), EVS disks, and EIP bandwidth. You are billed for the following resources on a pay-per-use basis.

Billing Item	Description
Node specifications	vCPUs and memory
Node storage	Disk storage type and capacity of the node storage
EIP bandwidth	If you enable public network access or Kibana public network access for a pay-per-use cluster, the EIP will be billed by bandwidth on a pay-per-use basis.

If you want to purchase a cluster with 40 GB high I/O nodes and enable Kibana public access, the prices will be displayed on the **Confirm Configuration** page, as shown in **Figure 2-4**.

**Figure 2-4** Example prices

Resource	Configure	Unit Price	Quantity	Price
Cluster	Name: cse-2031 Version: 7.10.2 Type: elasticsearch Billing Mode: Pay-per-use Enterprise Project: default	--	--	--
Node	Node Specifications: est-spec-4u8g   4 vCPUs   8 GB Node Capacity and Type: 40 GB High I/O	\$0.2560 USD per hour	1	\$0.2560 USD per hour
Network	Region: AP-Bangkok AZ: ap-southeast-2a VPC: vpc-default Subnet: subnet-default(192.168.0.0/24) Security Group: Sys-WebServer Security Mode: Enabled HTTPS Access: Enabled Public IP Address: Do not use	--	--	--
VPC Endpoint Service	Disabled	--	--	--
Cluster Snapshot	Disabled	--	--	--
Kibana Public Access	Kibana Public Access: Fully Dynamic BOP   1 Mbit/s Whitelist: --	\$0.0130 USD per hour	1	\$0.0130 USD per hour
Tags	--	--	--	--

Price: \$0.2690 USD per hour

The price includes:

- Node flavor (including vCPUs and memory)
- Node storage
- Kibana public network bandwidth

## Billed Usage Period

Pay-per-use ECS usage is calculated by the second and billed every hour. 58 minutes of usage will be rounded to the hour and billed. After the bill is generated, a new billing cycle starts. The billing starts when a cluster is created and ends when the cluster is deleted.

### NOTE

It takes a certain time to create a cluster. The billing starts from the time when the cluster is successfully created. You can view the creation time of the cluster on the cluster details page.

For example, if you purchased a pay-per-use cluster at 08:45:30 and delete it at 08:55:00, you are billed for one hour.

## Billing Examples

Suppose you purchased a cluster on April 18, 2023, 9:39:30 and deleted it on April 18, 2023, 10:45:46. Two usage periods will be billed:

- The first billing cycle is from 09:00:00 to 10:00:00, and the billing duration within the cycle is from 09:39:30 to 10:00:00.
- The second billing cycle is from 10:00:00 to 11:00:00, and the billing duration within the cycle is from 10:00:00 to 10:45:46.

You need to pay for each billing period, and clusters are billed individually. The billing formula is shown in [Table 2-4](#). The prices displayed in the pricing details are per hour.

**Table 2-4** Formulas for billing yearly/monthly clusters

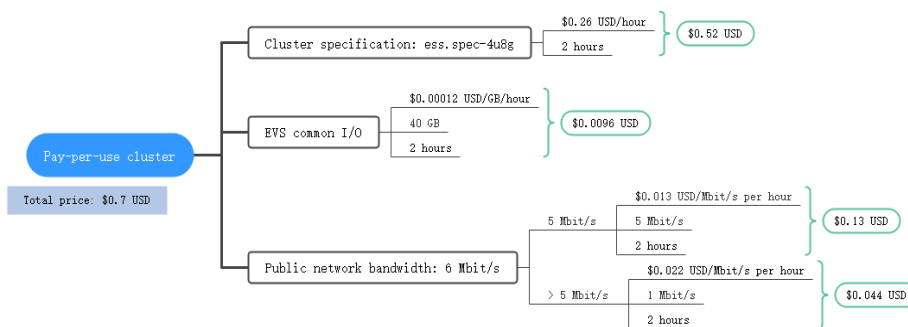
Resource	Formula	Unit Price
Node specifications	Unit price of the node specifications x Required duration	For details, see <b>Flavor Price</b> in <a href="#">CSS Pricing Details</a> .
Node storage	Unit price of the node storage x Required duration	For details, see <b>Storage Price</b> in <a href="#">CSS Pricing Details</a> .
EIP bandwidth	Tiered pricing based on fixed bandwidth. <ul style="list-style-type: none"> <li>0 Mbit/s to 5 Mbit/s (included): billed at a fixed unit price per Mbit/s</li> <li>Greater than 5 Mbit/s: billed at a different price per Mbit/s</li> </ul>	For details, see <b>Bandwidth Price</b> in <a href="#">CSS Pricing Details</a> .

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

**NOTICE**

The prices in the figure are examples only. The actual prices are those displayed on [CSS Pricing Details](#).

**Figure 2-5** Total price for a pay-per-use cluster



## Price Change After Specification Change

If you change the specifications of a pay-per-use cluster, 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 instance specifications within an hour, multiple records will be generated. The start time and end time of each billing record correspond to when different configurations took effect within the hour.

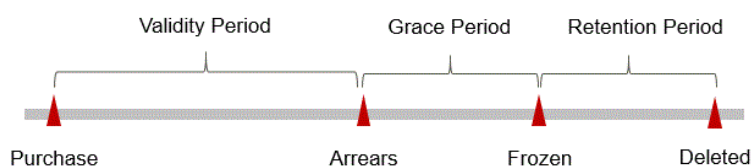
For example, if you purchased a pay-per-use cluster `ess.spec-4u8g` at 9:00:00 and upgraded it to `ess.spec-8u16g` at 9:30:00, the following items will be billed:

- `ess.spec-4u8g` cluster usage from 9:00:00 to 9:30:00
- `ess.spec-8u16g` cluster usage from 9:30:00 to 10:00:00

## Impacts of Arrears

**Figure 2-6** shows the statuses a pay-per-use cluster can have throughout its lifecycle. After a cluster is purchased, it enters the valid period and runs normally during this period. If your account goes into arrears, the cluster enters a grace period and then a retention period.

**Figure 2-6** Lifecycle of a pay-per-use cluster



### 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 internal message.

### Impacts of Arrears

Your account may fall into arrears due to automatic fee deduction for pay-per-use resources. However, relevant cloud services will not be stopped immediately. There will be a grace period for such resources. 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 pay the arrears within the grace period, the resources enter a retention period and will be frozen. You cannot perform any operations on the pay-per-use resources during this period.

If you do not bring your account balance current before the retention period ends, the node specifications (vCPUs and memory), node storage, and public network bandwidth will be released and the data cannot be restored.

 NOTE

For details about top-up, see [Topping Up an Account](#).

# 3 Billing Items

When using CSS, you will be billed by node specifications, node storage, and public network bandwidth. For details, see [Table 3-1](#).

 **NOTE**

The billing items marked with asterisks (\*) are mandatory.

**Table 3-1** CSS billing items

Billing Item	Description	Billing Mode	Billing Formula
*Node specifications	Billed by vCPUs and memory. Computing and storage capabilities vary by the number of vCPUs and memory size.	Yearly/ Monthly and pay-per-use	Unit price of the node specifications x Required duration For details, see <b>Flavor Price</b> in <a href="#">CSS Pricing Details</a> .
*Node storage	Disk storage type and size. Select disks of a type based on your business scenario. The billing standard varies depending on the disk type. CSS provides the following types of disks: <ul style="list-style-type: none"> <li>• <b>Common I/O</b></li> <li>• <b>High I/O</b></li> <li>• <b>Ultra-High I/O</b></li> </ul>	Yearly/ Monthly and pay-per-use	Unit price of the node storage x Required duration For details, see <b>Storage Price</b> in <a href="#">CSS Pricing Details</a> .



Billing Item	Description	Billing Mode	Billing Formula
EIP bandwidth	<p>When you enable public access or Kibana public access for a cluster, you will be billed for the bandwidth.</p> <p>CSS provides the following types of bandwidth:</p> <ul style="list-style-type: none"> <li>• <b>Low bandwidth</b> (1 to 5 Mbit/s)</li> <li>• <b>High bandwidth</b> (6 to 2,000 Mbit/s)</li> </ul> <p>The billing automatically falls into low or high bandwidth based on the bandwidth you select.</p>	Yearly/ Monthly and pay-per-use	<p>Tiered pricing based on fixed bandwidth.</p> <ul style="list-style-type: none"> <li>• 0 Mbit/s to 5 Mbit/s (included): billed at a fixed unit price per Mbit/s</li> <li>• Greater than 5 Mbit/s: billed at a different price per Mbit/s</li> </ul> <p>For details, see <b>Bandwidth Price</b> in <a href="#">CSS Pricing Details</a>.</p>

When purchasing a CSS cluster, you may be billed for snapshot storage. For details, see [Table 3-2](#).

**Table 3-2** Snapshot configuration billing items

Billing Item	Description
OBS	CSS uses OBS to store snapshots and logs, which incurs fees. For details, see the fees, see <a href="#">OBS Pricing Details</a> .

## Billing Example

Assume that you purchased a one-month cluster (flavor: `ess.spec-4u8g`) on March 08, 2023, 15:50:04, and billable resources included compute resources (vCPUs and memory), storage (common I/O, 40 GB), and Kibana public network access bandwidth (1 Mbit/s). Your subscription was one month and you manually renewed it for another month before it expired. The billed usage periods are as follows:

- Billed usage period 1: March 08, 2023, 15:50:04 to April 08, 2023, 23:59:59.
- Billed usage period 2: April 08, 2023, 23:59:59 to May 08, 2023, 23:59:59.

You will be billed for both usage periods. CSS resources are billed individually as follows:

**Table 3-3** Billing formula

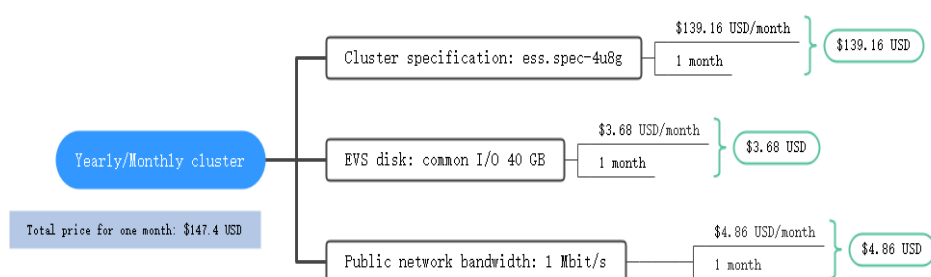
Resource	Billing Formula	Unit Price
Node specifications	Unit price of node flavors x Required duration	For details, see <b>Flavor Price</b> in <a href="#">CSS Pricing Details</a> .
Node storage	Unit price of the node storage x Required duration	For details, see <b>Storage Price</b> in <a href="#">CSS Pricing Details</a> .
EIP bandwidth	Tiered pricing based on fixed bandwidth. <ul style="list-style-type: none"> <li>0 Mbit/s to 5 Mbit/s (included): billed at a fixed unit price per Mbit/s</li> <li>Greater than 5 Mbit/s: billed at a different price per Mbit/s</li> </ul>	For details, see <b>Bandwidth Price</b> in <a href="#">CSS Pricing Details</a> .

**Figure 3-1** shows the billing calculation.

**NOTICE**

The prices in the figure are examples only. The actual prices are those displayed on [CSS Pricing Details](#).

**Figure 3-1** Total price for a yearly/monthly cluster



For billing examples of a pay-per-use cluster, see [Billing Examples](#).

# 4 Billing Examples

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## Billing Scenario

A user purchased a pay-per-use Elasticsearch cluster at 15:30:00 on March 18, 2023. The specifications are as follows:

- Node specifications: `ess.spec-4u8g`
- Node storage: common I/O, 40 GB
- Kibana public network access bandwidth: 6 Mbit/s

After a period of time, the user found that the current cluster specifications no longer met service requirements and updated the specifications to `ess.spec-8u16g` at 9:00:00 on March 20, 2023. Since the user wanted to use the cluster long term, the user then changed the cluster to yearly/monthly billing with a one-month duration at 10:30:00 on the same day. So how much will the user be billed for this cluster in March and April?

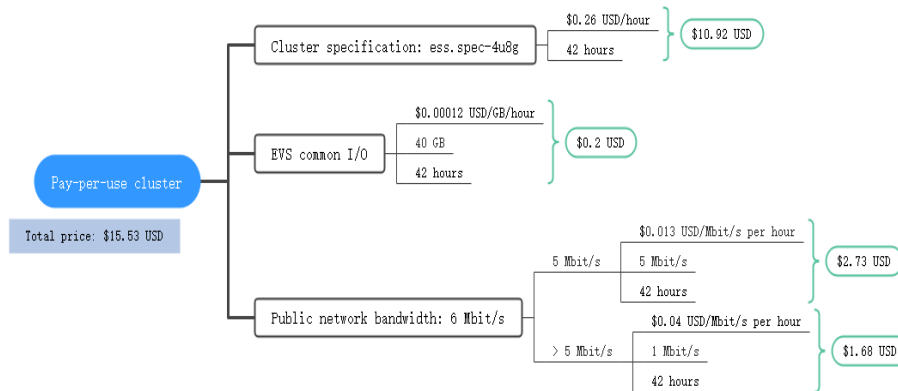
## Billing Analysis

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

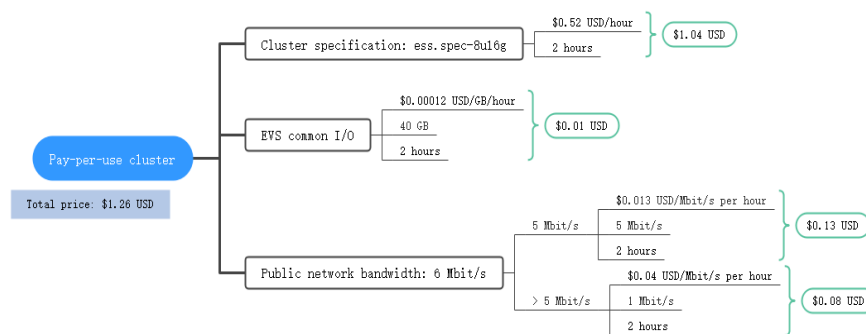
1. Pay-per-use usage: March 18, 2023, 15:30:00 to March 20, 2023, 10:30:00
2. Yearly/monthly usage: March 20, 2023, 10:30:00 to April 20, 2023, 23:59:59

### Pay-per-use

From March 18, 2023, 15:30:00 to March 20, 2023, 09:00:00, an `ess.spec-4u8g` flavor cluster was used for 41.5 hours, so the price would be calculated as follows:

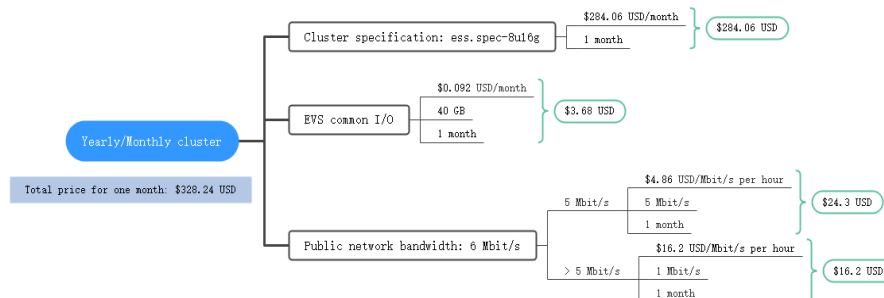


From March 20, 2023, 09:00:00 to March 20, 2023, 10:30:00, an `ess.spec-8u16g` flavor cluster was used for 1.5 hours, so the price would be calculated as follows:



### Yearly/Monthly

From March 20, 2023, 10:30:00 to April 20, 2023, 23:59:59, a cluster purchased using yearly/monthly billing was used for one month, so the price would be calculated as follows.



From March to April, the total fee of the cluster is \$345.03 ( $15.53 + 1.26 + 328.24$ ).

# 5 Billing Mode Changes

## 5.1 Overview

You can change the billing mode later if it no longer meets your needs. [Table 6-1](#) lists the changeable ECS billing items.

**Table 5-1** Changeable ECS billing items

Billing Item	Change Description	Reference
Node specifications	Changing the billing mode of a cluster includes the changes to compute resources (vCPUs and memory), storage, and public network bandwidth. <ul style="list-style-type: none"><li>• Change from pay-per-use to yearly/monthly to enjoy lower prices.</li><li>• Change from yearly/monthly to pay-per-use to use the cluster more flexibly.</li></ul> <b>NOTE</b> The pay-per-use mode takes effect only after a yearly/monthly period expires.	<a href="#">From Pay-per-Use to Yearly/Monthly</a> <a href="#">From Yearly/Monthly to Pay-per-Use</a>
Node storage		
EIP bandwidth		

**Figure 5-1** Billing mode change



- ①: The change takes effect immediately.
- ②: The change takes effect only after the yearly/monthly subscription expires.

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

If you have a pay-per-use cluster that you expect to use for a long time, you can change it to yearly/monthly billing to cut 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 cluster 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 Center > Billing** page, three bills are generated as follows:

- 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 April 18, 2023
- A single, yearly/monthly expenditure generated April 18, 2023, 16:30:30

### NOTE

If public access or Kibana public access is enabled for a yearly/monthly cluster, and the bandwidth is changed, you will be billed based on the new bandwidth. For details, see [Product Pricing Details](#).

## Procedure

- Step 1** Log in to the CSS management console.
- Step 2** On the **Clusters** page, select a cluster.
- Step 3** Click **More > Switch to Yearly/Monthly** in the **Operation** column.

### NOTE

If **Switch to Yearly/Monthly** is grayed out, you cannot change the billing mode in the current region.

- Step 4** On the **Switch to Yearly/Monthly** page, set subscription period and enable auto-renewal as required.
- Step 5** Click **Pay Now**. Confirm order details and click **Pay**.

Return to the **Clusters** page and check the current billing mode in the **Billing Mode** column.

----End

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

After creating a yearly/monthly cluster, 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.

### Prerequisites

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

### Procedure

- Step 1** Log in to the CSS management console.
- Step 2** On the **Clusters** page, locate the target yearly/monthly cluster.
- Step 3** Choose **More > Change to Pay-per-Use Upon Expiration** in the **Operation** column.
- Step 4** On the **Change to Pay-per-Use upon Expiration** dialog box, confirm the information and click **OK**.

### NOTE

- If the cluster billing mode is changed to pay-per-use during the yearly/monthly subscription period, the change will take effect when the yearly/monthly subscription expires.
- The billing mode cannot be changed for a cluster that has expired or been frozen.

On the **Clusters** page and check the current billing mode in the **Billing Mode** column.

----End

# 6 Renewing Subscriptions

## 6.1 Overview

### When to Renew Subscriptions

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

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

If you renew the cluster before it expires, resources will be retained and you can continue using the cluster. For details about cluster status after it is expired and the associated impacts, see [Impact After Expiration](#).

### How to Renew Subscriptions

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

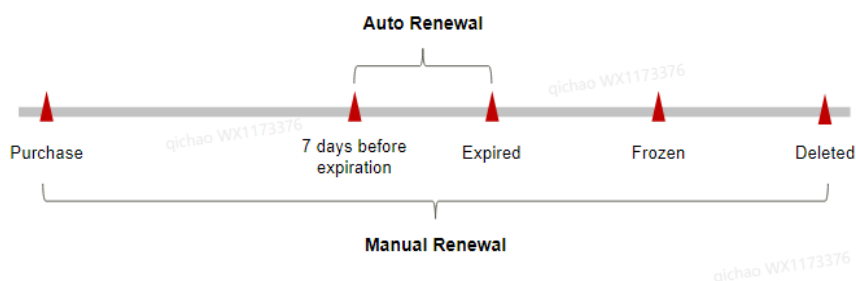
**Table 6-1** Renewing a yearly/monthly cluster

Method	Description
<a href="#">Manually Renewing a Cluster</a>	You can renew a yearly/monthly cluster on the console anytime before it is automatically deleted.
<a href="#">Auto-renewing a Cluster</a>	You can enable auto-renewal to automatically renew the cluster 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 cluster based on the lifecycle phase the cluster is currently in **Figure 6-1**.

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



- A cluster is in the **Running** state after it is provisioned.
- When a cluster expires, the cluster status will change from **Running** to **Expired**.
- If an expired cluster is not renewed, it enters a grace period. If it is not renewed by the time the grace period expires, the cluster 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.

You can enable auto-renewal anytime before a cluster 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 Cluster

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

### Procedure

- Step 1** Log in to the CSS management console.
- Step 2** On the cluster management page, select the yearly/monthly cluster to be renewed.
- Step 3** Choose **More > Renew** in the **Operation** column.
- Step 4** On the **Renew** page, 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".
- Step 5** Confirm the price and click **Pay**.
- Step 6** Select a payment method and make your payment. Once the order is paid for, the renewal is complete.

**NOTE**

A cluster that has expired or been frozen will be available after renewal.

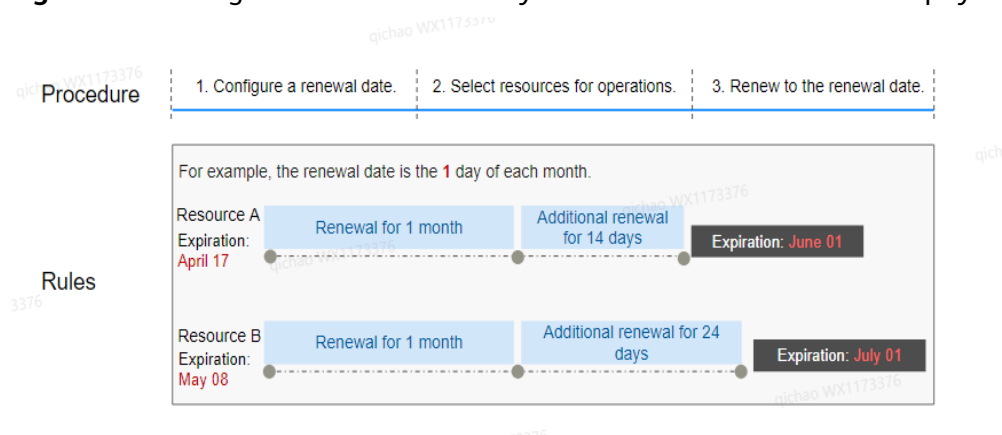
----End

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

If the clusters 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 6-2](#), a user sets the same renewal day for two resources that will expire at different dates.

**Figure 6-2** Setting the same renewal day for resources with different expiry dates



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

## 6.3 Auto-renewing a Cluster

Auto-renewal can prevent ECSs 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 cluster expires and the billing cycle.
- The auto-renewal period of a cluster varies depending on how you enable auto-renewal.
- You can enable auto-renewal anytime before a cluster 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 manually renew the cluster 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 cluster is not expired.

## Auto-renewal has been enabled during the purchase.

You can enable auto-renewal on the cluster purchase page, as shown in [Figure 6-3](#).

**Figure 6-3** Enabling auto-renewal



If you enable auto-renewal when buying a cluster, the auto-renewal periods are as follows:

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

## Enabling Auto-Renewal on the Renewals Page

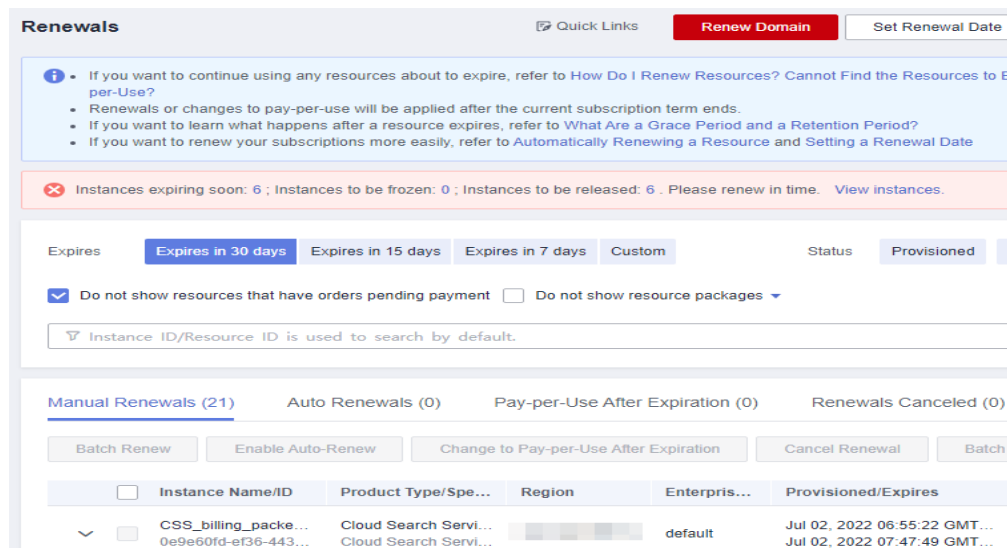
**Step 1** Log in to the CSS management console.

**Step 2** On the top of the console page, choose **Billing & Costs > Renewal**.

**Step 3** Select the search criteria.

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

**Figure 6-4 Renewals**



**Step 4** Select one or more clusters and click **Enable Auto-Renew**.

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

----End

## Modifying Auto-Renew

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

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

**Step 2** On the navigation pane in the left, select the target cluster type to view the cluster list.

For example, choose **Clusters > Elasticsearch** in the navigation pane to view the cluster list.

**Step 3** Select the cluster that you want to change auto-renew information and click **More > Change Auto-Renew** in the **Operation** column.

**Step 4** Confirm the cluster information in the dialog box and click **OK**.

**Step 5** In the **Modify Auto-Renew** page, modify the renew parameters by referring to [Table 6-2](#), and click **OK**.

**Table 6-2** Modifying auto-renew

Parameter	Description
Instance Name/ID	Select the cluster that you want to modify auto-renew information. You can click <b>∨</b> to view the cluster information.
Renewal Option	You can select <b>Automatic</b> and <b>Manual</b> .

Parameter	Description
New Auto-Renew Period	If the <b>Renewal Option</b> is set to <b>Automatic</b> , you need to set the <b>New Auto-Renew Period</b> based on your service requirements.
Auto-renewals	<p>If the <b>Renewal Option</b> is set to <b>Automatic</b>, you need to determine whether to reset the number of auto-renewal times.</p> <p>If you select <b>Reset Auto-renewals</b>, you also need to select <b>Unlimited</b> or <b>Custom</b>.</p> <ul style="list-style-type: none"> <li>● <b>Unlimited:</b> The cluster can be automatically renewed for an unlimited number of times.</li> <li>● <b>Custom:</b> Enter a value from 1 to 1,000. The auto-renewal is disabled after the cluster is automatically renewed for the specified number of times.</li> </ul>

----End

# 7 Arrears

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Your account goes into arrears when the balance is less than the bill to be settled. If you want to continue using the resources you are currently using, you will need to top up your account in a timely manner.

## Arrears Reason

The configured payment method is unable to pay for the used resources on the pay-per-use basis.

## Impacts of Arrears

- Yearly/Monthly

This is a pre-paid billing mode, so you can continue using yearly/monthly clusters even if your account is in arrears. However, you cannot use OBS or renew orders, because they will generate new expenditures.

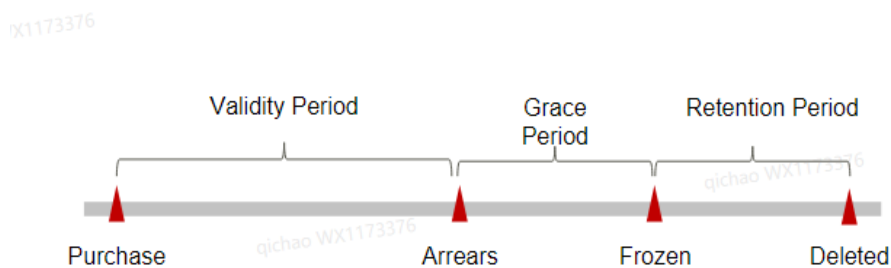
- Pay-per-Use

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

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

After the retention period ends, the computing resources (vCPUs and memory), EVS disks, and EIPs will be released and cannot be restored.

**Figure 7-1** Lifecycle of a pay-per-use cluster



## Avoiding and Handling Arrears

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

If data stored in the OBS is no longer needed, you can delete it to release storage space.

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 below the threshold you specify, Huawei Cloud automatically notifies you by SMS or email.

# 8 Billing Termination

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## Yearly/Monthly Clusters

- If you purchase a yearly/monthly cluster, you make a one-time up-front payment. By default, the billing automatically stops when the purchased subscription expires. 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.
- If you no longer need a resource, but the subscription has not yet expired, you can unsubscribe from it. The unsubscription procedure is as follows:
  - a. Log in to the CSS management console.
  - b. On the **Clusters** page, locate the cluster you want to unsubscribe from.
  - c. Choose **More > Unsubscribe/Release** in the **Operation** column.
  - d. In the **Unsubscribe Cluster** dialog box, enter **RETREAT**, and then click **OK**.

On the displayed page, confirm the resource information and refund amount.
  - e. Select the unsubscription reason, select the acknowledgement check boxes, and click **Unsubscribe**.

In the displayed confirmation dialog box, click **Unsubscribe**.

## Pay-per-Use Resources

If a pay-per-use cluster that contains pay-per-use public network bandwidth and EVS disks is no longer required, delete the cluster.

The unsubscription procedure is as follows:

1. Log in to the CSS management console.
2. On the **Clusters** page, locate the cluster you want to unsubscribe from.
3. In the **Operation** column, choose **More > Delete**.
4. In the **Delete Cluster** dialog box, enter **DELETE**, and then click **OK**.



## Clearing Storage Data

CSS snapshots are stored in OBS. To stop storage billing, switch to the OBS console and delete the data and directories.

# 9 Cost Management

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As you migrate more of your services to the cloud, managing cloud costs becomes more important. How to manage costs and reduce service loads when using CSS is also our concerns. The following describes how to manage costs from four dimensions: cost composition, allocation, analysis, and optimization, to help maximize return on your investment.

## Cost Composition

The costs of using CSS depend on the service edition and resource packages you use. Billing items are different for each edition.

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 ensures that departments, business teams, and owners are accountable for their respective cloud costs. Allocate costs to different teams or projects so that organizations have a clear picture of their respective costs.

Huawei Cloud [Cost Center](#) supports cost collection and reallocation with multiple tools for you to choose from.

- **Allocate costs by linked account.**

The enterprise master account categorizes the costs of its member accounts to manage the accounting of these accounts. For details, see [Viewing Costs by Linked Account](#).

- **Allocate costs by enterprise project.**

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

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

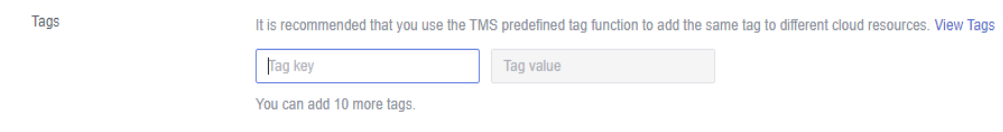


- **Allocate costs by cost tag.**

Huawei Cloud assigns sorting tags such as purpose, owner, or environment, to your cloud resources. These are the four steps for managing costs by predefined tags.



**Figure 9-2** Adding tags



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

- **Allocate costs by cost category.**

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

## Cost Analysis

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

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

For details, see [Performing Cost Analysis to Explore Costs and Usage](#) and [Performing Cost Analysis to Explore Costs and Usage](#).

## Cost Optimization

- **Cost control**

You can create different types of budgets on the **Budgets** page of Cost Center to track your costs against the budgeted amount you specified and send alerts to the recipients you configured if the thresholds you defined are reached. You can also create budget reports and Huawei Cloud will periodically generate and send to the recipients you configured on a schedule you set.

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

- Specify your budget details, including the reset period and budgeted amount.

**Figure 9-3** 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	<input type="text" value="css-Pay-per-use-3000"/>	
* Reset Period	<input type="radio"/> Daily <input checked="" type="radio"/> Monthly <input type="radio"/> Quarterly <input type="radio"/> Yearly	Budget evaluation begins at 00:00 GMT+08:00 on the 1st day, moving forward.
* Budget Duration	<input checked="" type="radio"/> Recurring <input type="radio"/> Expiring	
* Start Time	<input type="text" value="2023/09"/>	
* Allocation	<input checked="" type="radio"/> Fixed <input type="radio"/> Monthly <input type="radio"/> Dynamic	
* Budgeted Amount (USD)	<input type="text" value="3000"/>	Last month's cost: \$0.00 USD

- Define a budget scope as required. In the left pane, filter service type, enterprise project, billing mode, and so on.

**Figure 9-4** Budget scope

Service Type	Include	
Cloud Search Service (CSS)		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	

- c. Set alert thresholds and recipients.  
The system should send an alarm when the predicted amount is greater than 80% of the budget amount.

**Figure 9-5** Budget alerts

**(Optional) Alert Thresholds**

Thresholds

[+ Add threshold](#)

Recipients [+ Select From Contacts](#)

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

# 10 Billing FAQs

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## 10.1 How Do I Unsubscribe from a CSS Cluster?

### Unsubscribing from a Yearly/Monthly Cluster

1. Log in to the CSS management console.
2. On the **Clusters** page, locate the cluster you want to unsubscribe from.
3. Choose **More > Unsubscribe/Release** in the **Operation** column.
4. In the **Unsubscribe Cluster** dialog box, enter **RETREAT**, and then click **OK**.  
On the displayed page, confirm the resource information and refund amount.
5. Select the unsubscription reason, select the acknowledgement check boxes, and click **Unsubscribe**.  
In the displayed confirmation dialog box, click **Unsubscribe**.

### Deleting a Pay-per-Use Cluster

Deleting a pay-per-use cluster stops billing right away.

1. Log in to the CSS management console.
2. On the **Clusters** page, locate the cluster you want to unsubscribe from.
3. In the **Operation** column, choose **More > Delete**.
4. In the **Delete Cluster** dialog box, enter **DELETE**, and then click **OK**.

## 10.2 How Do I Renew the Yearly/Monthly Resources of CSS?

CSS resources can be renewed yearly or monthly. The renewal operations are as follows:

### Renewing an existing cluster

Perform the following steps:

1. On the CSS console, choose **Clusters**.
2. In the row of a yearly/monthly cluster, choose **More > Renew**.
3. Select the required duration and pay for the order.

### Enabling auto-renew during cluster creation

When creating a cluster, perform the following steps:

On the cluster creation page, select a required duration and select **Auto-renew**. The cluster will be automatically renewed when its subscription expires.

**Figure 10-1** Enabling auto-renew



For more information about yearly/monthly renewals, see [Renewal Management](#).