

# Cloud Container Engine

## Billing

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# 1 Billing Overview

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

- **Billing Modes**

There are yearly/monthly and pay-per-use billing modes to meet your requirements. For details, see [Overview](#).

- Yearly/Monthly: You pay upfront for the amount of time you expect to use the resources 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 CCE resources first and then pay as you go.

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

- **Billed Items**

You will be billed for clusters, nodes, and other cloud service resources. For details about the billing factors and formulas for each billed item, see [Billed Items](#).

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

- **Renewing Subscriptions**

If a yearly/monthly cluster is about to expire, but you want to continue using it, you need to renew the subscription within the specified period. Otherwise, the cluster will be automatically released and data may be lost. You can renew your subscription manually or automatically. For details, see [Overview](#).

- **Viewing Bills**

In **Billing Center**, choose **Billing** and check the CCE transactions and bills. For details, see [Bills](#).

- **Arrears**

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

- **Stopping Billing**

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

# 2 Billed Items

When using the CCE service, you will be billed for clusters and other cloud service resources.

Figure 2-1 Billed CCE items



**NOTE**

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

**Table 2-1** Billed items

Billed Item	Description	Billing Mode	Formula
*Cluster	<p>Cluster management. The price varies depending on the region where each cluster is located, the number of master nodes (HA or not), and the maximum number of worker nodes.</p> <p>You do not need to pay for the management of a hibernated cluster, but the cloud service resources used in the cluster, such as EVS disks, EIPs, and bandwidths will be charged in their own billing modes.</p>	Yearly/ Monthly or pay-per-use	<p><b>Unit price of the cluster flavor x Required duration</b></p> <p>For details, see <a href="#">CCE Pricing Details</a>.</p>
Other cloud service resources	<p>Cloud service resources that are used in a cluster and created either manually or automatically, such as ECSs, EVS disks, OBS storage, EIPs, and load balancers.</p> <p>Although cloud service resources can be created on the CCE console, their billed items and bills are independent of those of CCE clusters. For details, see <a href="#">Table 2-2</a>.</p>	Respective billing modes	None

The following table lists the cloud service resources that may be used in a CCE cluster. These resources are billed separately.

**Table 2-2** Billed items of other cloud service resources

Billed Item	Description	Billing Mode	Formula
ECS	<p><b>ECS flavor:</b> When purchasing a node, ensure that the number of vCPUs is greater than or equal to 2 and the memory is greater than or equal to 4 GiB.</p> <p>Billed by ECS flavor, including vCPUs and memory. Computing and storage capabilities vary by the number of vCPUs and memory size.</p>	Yearly/ Monthly or pay-per-use	<p><b>Unit price of the ECS flavor x Required duration</b></p> <p>For details, see <a href="#">ECS Pricing Details</a>.</p>
	<p><b>EVS disks (including system disks and data disks):</b> When purchasing a node, you must purchase system disks and data disks.</p> <ul style="list-style-type: none"> <li>• System disk: The default capacity is 50 GiB. You can adjust the capacity as required.</li> <li>• Data disk: The default capacity is 100 GiB. You can adjust the capacity (no less than 20 GiB). You can also add more data disks as needed.</li> </ul> <p>Billed by EVS disk type and capacity.</p> <p>Regardless of whether you use the disk after purchasing it, you will be charged right away.</p>	Yearly/ Monthly or pay-per-use	<p><b>Unit price of an EVS disk x EVS disk capacity x Required duration</b></p> <p>For details, see <a href="#">EVS Pricing Details</a>.</p>



Billed Item	Description	Billing Mode	Formula
	<p>(Optional) EIP: To access the Internet from a node, you need to purchase an EIP.</p> <p>Billed by the EIP and bandwidth or traffic.</p> <ul style="list-style-type: none"> <li>• EIP for a yearly/monthly node: billed by bandwidth</li> <li>• EIP for a pay-per-use node: billed by bandwidth or traffic. You are charged for the EIP no matter if it is not bound to any instance.</li> </ul> <p>When you purchase a node on the CCE console, a pay-per-use EIP cannot be added to a shared bandwidth. Go to the EIP console to add it to a shared bandwidth.</p>	<p>Yearly/ Monthly or pay-per-use</p>	<ul style="list-style-type: none"> <li>• <b>Tiered pricing based on fixed bandwidth.</b> <ul style="list-style-type: none"> <li>- 0 Mbit/s to 5 Mbit/s (included): <b>Bandwidth x Price per Mbit/s of bandwidth less than 5 Mbit/s</b></li> <li>- Greater than 5 Mbit/s: <b>5 x Price per Mbit/s of bandwidth less than 5 Mbit/s + (Bandwidth - 5) x Price per Mbit/s of bandwidth more than 5 Mbit/s</b></li> </ul> </li> <li>• <b>By traffic: EIP traffic x Unit price</b></li> </ul> <p>For details, see <a href="#">EIP Pricing Details</a>.</p>

Billed Item	Description	Billing Mode	Formula
ELB	<p>Used by the Services and Ingresses created in a cluster. A load balancer automatically created on the CCE console is billed on the pay-per-use basis only.</p> <p><b>Billed by:</b></p> <ul style="list-style-type: none"> <li>Shared load balancer: load balancer, and EIP (billed by bandwidth or traffic)</li> <li>Dedicated load balancer: the number of AZs, load balancer, and EIP (billed by bandwidth or traffic)</li> </ul>	Yearly/ Monthly or pay-per-use	<ul style="list-style-type: none"> <li><b>Shared load balancer: Unit price x Required duration + EIP</b></li> <li><b>Dedicated load balancer: Number of AZs x Unit price x Required duration + EIP</b></li> </ul> <p>For details, see <a href="#">ELB Pricing Details</a>.</p>
NAT Gateway	<p>NAT gateways cannot be automatically created on the CCE console. Buy them on the NAT Gateway console.</p> <p>Billed by instance.</p>	Yearly/ Monthly or pay-per-use	<p><b>Unit price x Required duration</b></p> <p>For details, see <a href="#">NAT Gateway Pricing Details</a>.</p>
EVS	<p>Mounted to the workloads in a cluster. An EVS disk automatically created on the CCE console is billed on the pay-per-use basis only.</p> <p>Billed by EVS disk type and capacity.</p> <p>Regardless of whether you use the disk after purchasing it, you will be charged right away.</p>	Yearly/ Monthly or pay-per-use	<p><b>Unit price x Purchase duration</b></p> <p>For details, see <a href="#">EVS Pricing Details</a>.</p>

Billed Item	Description	Billing Mode	Formula
OBS	<p>Mounted to the workloads in a cluster. A parallel file system is recommended. OBS storage automatically created on the CCE console is billed on the pay-per-use basis only.</p> <p>Billed by storage space, requests, traffic (free for intranet traffic), and data retrievals (only for Archive storage).</p>	Yearly/ Monthly (resource packages) and pay-per-use	<p><b>Storage unit price x Storage space x Required duration + Traffic request unit price x Number of requests + Unit price of outbound Internet traffic (by time) x Outbound Internet traffic volume+ Data retrieval unit price (by retrieval speed) x Data retrieved</b></p> <p>For details, see <a href="#">OBS Pricing Details</a>.</p>
Scalable File Service (SFS)	<p>Mounted to the workloads in a cluster. An SFS system automatically created on the CCE console is billed on the pay-per-use basis only.</p> <p>Billed by storage space.</p>	Yearly/ Monthly or pay-per-use	<p><b>Storage unit price x Storage space x Required duration</b></p> <p>For details, see <a href="#">SFS Pricing Details</a>.</p>
SFS Turbo	<p>Mounted to the workloads in a cluster. SFS Turbo systems cannot be automatically created on the CCE console. Manually create them on the SFS Turbo console.</p> <p>Billed by storage space and bandwidth (only for HPC-cached SFS Turbo systems).</p>	Yearly/ Monthly or pay-per-use	<p><b>Storage unit price x Storage space x Required duration + Bandwidth (only for HPC-cached SFS Turbo systems) x Required duration</b></p> <p>For details, see <a href="#">SFS Pricing Details</a>.</p>

# 3 Billing Modes

## 3.1 Overview

There are yearly/monthly and pay-per-use billing modes to meet your requirements.

- 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. You pay as you go and just pay for what you use. The usage is calculated by the second but billed every hour. This mode allows you to flexibly adjust resource usage. You neither need to prepare for resources in advance, nor end up with excessive or insufficient preset resources. Pay-per-use billing is a good option for scenarios where there are sudden traffic bursts, such as e-commerce promotions.

You can select different billing modes for your clusters or nodes on the CCE console. You can, for example, select pay-per-use for your nodes running in a cluster which is billed on the yearly/monthly basis.

However, on the CCE console, the related [cloud service resources](#) cannot be billed on the yearly/monthly mode. These resources are billed on the pay-per-use mode by default when they are automatically created in the CCE cluster. To purchase yearly/monthly cloud service resources, go to their respective consoles. For details, see their billing descriptions.

**Table 3-1** Cluster billing mode

Billing Mode	Yearly/Monthly	Pay-per-use
Payment	Prepaid Billed by the subscription term you purchase	Postpaid Calculated by the second but billed every hour
Billed Usage Period	Billed by the subscription term you purchase	Calculated by the second but billed every hour

<b>Billing for a Hibernated Cluster</b>	A cluster billed in yearly/monthly mode cannot be hibernated.	You do not need to pay for the management of a hibernated cluster, but the cloud services used in the cluster, such as EVS disks, EIPs, and bandwidths will be charged in their own billing modes like yearly/monthly or pay-per-use. <b>NOTE</b> In a hibernated cluster, the worker nodes (ECSs) will not be stopped. To stop all nodes, select <b>Shut down all nodes in the cluster</b> . You can also stop a node on the ECS console after hibernating a cluster. For details, see <a href="#">Stopping a Node</a> .
<b>Changing the Billing Mode</b>	Yearly/Monthly can be changed to pay-per-use only after the yearly/monthly subscription expires.	Pay-per-use can be changed to yearly/monthly.
<b>Modifying Specifications</b>	Supported	Supported
<b>Application Scenarios</b>	A cost-effective option for scenarios where the resource usage duration is predictable. Recommended for resources expected to be used for a long-term.	Recommended when the resource demands are likely to fluctuate and you want more flexibility.

## 3.2 Yearly/Monthly Billing

If you expect to use resources for a longer period, you can save money by selecting yearly/monthly billing. You can pre-purchase cloud service resources at discounted prices. This section describes the billing rules for purchasing yearly/monthly resources on the CCE console.

### 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 high data security requirements

## Billed Items

When using CCE service, you can select a billing mode (the yearly/monthly mode or the pay-per-use mode) for items listed in [Table 3-2](#). On the CCE console, the related [cloud service resources](#) cannot be purchased on the yearly/monthly basis. To purchase yearly/monthly cloud service resources, go to their respective consoles. For details, see their billing descriptions.

**Table 3-2** Items billed on a yearly/monthly basis

Billed Item	Resource Type	Description
Cluster	N/A	A cluster is billed on a yearly/monthly basis based on the cluster scale and HA mode.
ECS	ECS flavor	vCPUs and memory are billed on a yearly/monthly basis.
	EVS disk	If an EVS disk (a system disk or a data disk) is created along with a yearly/monthly ECS, the EVS disk is also billed on a yearly/monthly basis.
	EIP	Only EIPs billed by bandwidth can be bound to yearly/monthly ECSs created on the CCE console. If you want an EIP billed by traffic or added to a shared bandwidth, purchase one on the EIP console and bind it to an ECS.  If an EIP billed by bandwidth is purchased along with a yearly/monthly ECS, the bandwidth is also billed on a yearly/monthly basis.

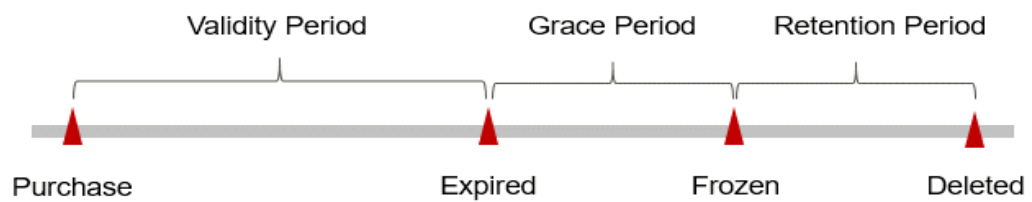
## Billed Usage Period

A yearly/monthly CCE resource is billed for the purchased duration (GMT+08:00). 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 purchase a one-month CCE 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.

## Impact of Expiration

[Figure 3-1](#) shows the statuses a yearly/monthly resource can go through throughout its lifecycle. After a CCE resource is purchased, it enters the valid period and runs normally during this period. If it is not renewed after it expires, before being deleted, it first enters a grace period and then a retention period.

**Figure 3-1** Lifecycle of a yearly/monthly CCE resource

### Expiration Reminder

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

### Impact of Expiration

If the yearly/monthly resource is not renewed after it expires, it changes to the **Expired** state and enters a grace period. During the grace period, you can still access the resource.

If it 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 resource while it is in the retention period.

If it is not renewed after the retention period expires, other resources (such as EVS disks and EIPs) contained in the resource will be released and data cannot be restored.

#### NOTE

- Once a yearly/monthly subscription has expired or a pay-per-use resource becomes in arrears, Huawei Cloud provides a period of time during which you can renew or top up your accounts. For details, see [What Is a Grace Period of Huawei Cloud? How Long Is It?](#) [What Is a Retention Period of Huawei Cloud? How Long Is It?](#)
- For details about renewal, see [Overview](#).

## 3.3 Pay-per-Use Billing

Pay-per-use is a postpaid billing mode. If you expect to use resources flexibly, this billing mode is suitable for you. This section describes the billing rules for pay-per-use CCE resources.

### Application Scenarios

Pay-per-use billing is good for short-term, bursty, or unpredictable workloads, such as applications for e-commerce flash sales, temporary testing, and scientific computing.

### Billed Items

When using the CCE service, you can select a billing mode for items listed in [Table 3-3](#) on the CCE console. The [related cloud service resources](#) automatically created on the CCE console are billed on a pay-per-use basis by default. For details, see their respective billing descriptions.

**Table 3-3** Items billed on a pay-per-use basis

Billed Item	Resource Type	Description
Cluster	N/A	A cluster is billed on a pay-per-use basis based on the cluster scale and HA mode.
ECS	ECS flavor	vCPUs and memory are billed on a pay-per-use basis.
	EVS disk	If an EVS disk (a system disk or a data disk) is created along with a pay-per-use ECS, the EVS disk is also billed on a pay-per-use basis.
	EIP	An EIP billed by bandwidth or traffic can be bound to a pay-per-use ECS created on the CCE console, but cannot be added to a shared bandwidth on the CCE console. If you want to add an EIP to a shared bandwidth, purchase one on the EIP console and then bind it to the ECS.  If an EIP billed by bandwidth is purchased along with a pay-per-use ECS, the bandwidth is also billed on a pay-per-use basis.

## Billed Usage Period

A pay-per-use CCE resource is calculated by the second and billed every hour (GMT+08:00). Once settlement is complete, it enters a new billed usage period. The billing starts when a cluster or node is launched and ends when the cluster or node is deleted.

### NOTE

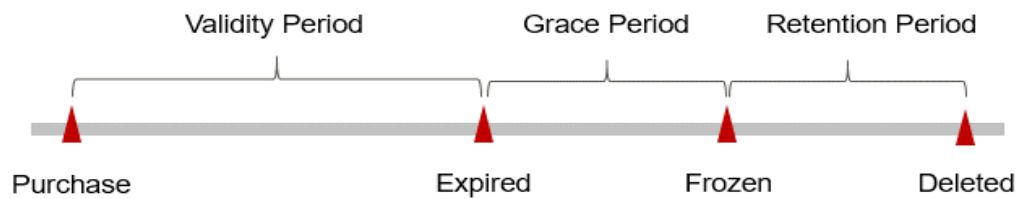
It takes a certain time to launch a CCE cluster or node. The billing starts from the time when the cluster or node is successfully created. You can view the time in **Operation Records** on the CCE console.

For example, if you purchased a pay-per-use CCE cluster at 08:45:30 and deleted it at 08:55:30, you are billed for the 600 seconds from 08:45:30 to 08:55:30.

## Impact of Arrears

**Figure 3-2** shows the statuses a pay-per-use resource can have throughout its lifecycle. After a resource is purchased, it enters the valid period and runs normally during this period. If your account goes into arrears, it enters a grace period and then a retention period.



**Figure 3-2** Lifecycle of a pay-per-use CCE resource

### Arrears Reminder

You will be billed for pay-per-use resource after each billed usage period ends. If your account goes into arrears, we will notify you by email, SMS, or in-app message.

### Impacts of Arrears

If there is no top-up account with sufficient balance and no other payment method configured to pay for the resource used, your account goes into arrears, and the resource enters the grace period. You are still responsible for expenditures generated during the grace period. You can view the charges on the **Billing Center > Overview** page and pay any past due balance as needed.

If you do not bring your account balance current before the grace period expires, the resource turns to **Frozen** and enters a retention period. You cannot perform any operations on a pay-per-use resource in the **Frozen** status.

After the retention period ends, CCE clusters and resources like nodes, EVS disks, and EIPs will be released and cannot be restored.

#### NOTE

- Once a yearly/monthly subscription has expired or a pay-per-use resource becomes in arrears, Huawei Cloud provides a period of time during which you can renew or top up your accounts. For details, see [What Is a Grace Period of Huawei Cloud? How Long Is It? What Is a Retention Period of Huawei Cloud? How Long Is It?](#)
- For details about top-up, see .

## Billing for a Hibernated Cluster

Generally, after a pay-per-use CCE cluster is hibernated:

- You will not be billed for the management of the cluster, but other cloud service resources like EVS disks and bandwidth in the cluster will still be billed in their own billing modes.
- ECSs in the cluster will not stop automatically. To stop all the nodes, select **Shut down all nodes in the cluster**. You can also stop a node on the ECS console. For details, see [Stopping a Node](#). For details about the billing policies after the nodes are stopped, see [Billing Policies for a Stopped Node](#).
- Resources on the master nodes will be released. If computing resources are insufficient, the subsequent cluster wakeup may fail.

For example, if you purchased a pay-per-use cluster with 50 worker nodes at 09:00:00 and hibernated it at 09:30:00, you are billed for the 30 minutes from 09:00:00 to 09:30:00 within the billed usage period from 09:00:00 to 10:00:00.

## Billing Policies for a Stopped Node

Generally, after a pay-per-use node is stopped:

- Basic resources (vCPUs and memory) will not be billed.
- Other resources (EVS disks and bandwidth) used by the node are still charged.
- Basic resources (vCPUs and memory) will be released, so ECS startup may fail. Wait a moment and try again.
- Basic resources (vCPUs and memory) of ECSs created on a DeH or in an edge AZ will be retained.

If a local disk is attached to an ECS (such as a disk-intensive ECS or an ultra-high I/O ECS), basic resources (vCPUs, memory, and images) and other resources (EVS disks and bandwidth) are still billed after the ECS is stopped. To avoid any additional expenditures, delete the ECS and all its resources.

# 4 Billing Examples

## Billing Scenario

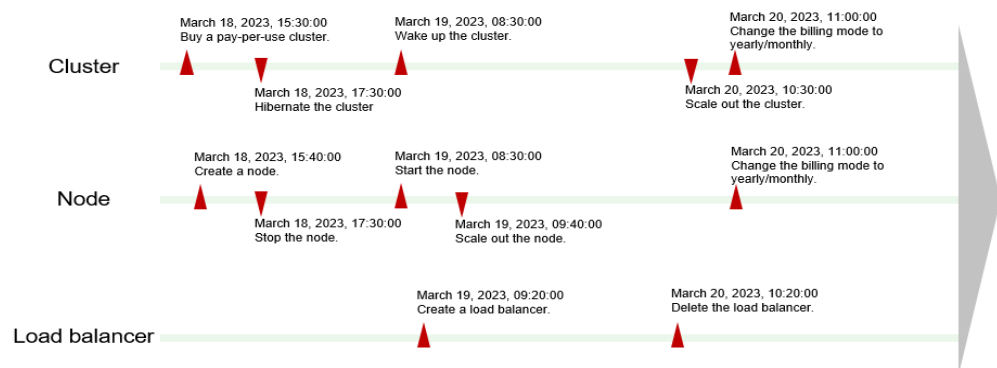
A user purchased a pay-per-use CCE cluster for migrating data to the cloud. The following table lists the resources and configuration of the cluster.

**Table 4-1** Original resources and configuration

Resource Type	Billing Start Time	Original Billing Mode	Original Configuration	Quantity
Cluster	March 18, 2023, 15:30:00	Pay-per-use	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Cluster scale: 50 worker nodes</li> <li>HA mode</li> </ul>	1
ECS	March 18, 2023, 15:40:00	Pay-per-use	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Specifications: c7.large.2 2 vCPUs   4 GiB</li> <li>System disk: General Purpose SSD   50 GiB</li> <li>Data disk: General Purpose SSD   100 GiB</li> <li>EIP bandwidth: 6 Mbit/s, billed by bandwidth</li> </ul>	1
Load balancer	March 19, 2023, 09:20:00	Pay-per-use	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Type: Dedicated load balancer</li> <li>AZ: single AZ</li> <li>Specifications: network load balancing (TCP/UDP), small I (10 LCUs)</li> <li>EIP bandwidth: 5 Mbit/s, billed by traffic</li> </ul>	1

After a period of time, the user found that the current specifications no longer met service requirements and updated the specifications.

**Figure 4-1** Example



1. The user hibernated the cluster and stopped the node in the cluster at 17:30:00 on March 18, 2023.
2. At 08:30:00 on March 19, 2023, the user woke up the cluster and started the node.
3. When deploying services in the cluster, the user used a load balancer automatically created at 09:20:00 on March 19, 2023.
4. At 09:40:00 on March 19, 2023, the user expanded the existing node flavor to c7.xlarge.2 (4 vCPUs, 8 GiB) due to insufficient resources.
5. After the test, the automatically created load balancer was deleted at 10:20:00 on March 20, 2023 because it was no longer used. During the deletion, 5 GB public network traffic was generated.
6. After the verification, the user planned to migrate services to CCE and predicted that the cluster scale would be 50 to 200 worker nodes. Therefore, the user changed the cluster scale to 200 worker nodes at 10:30:00 on March 20, 2023.
7. The user changed the billing mode of the cluster to yearly/monthly at 11:00:00 on March 20, 2023 for a long-term use of this cluster. The validity period was one month, and the cluster expired at 23:59:59 on April 20, 2023.
8. The billing mode of the node in the cluster also changed to yearly/monthly at 11:10:00 on March 20, 2023. The subscription duration was one month, and the node expired at 23:59:59 on April 20, 2023.

The price can be analyzed based on resource types as follows:

- [Billing Analysis of a Cluster](#)
- [Billing Analysis of a Node](#)
- [Billing Analysis of a Load Balancer](#)

## Billing Analysis of a Cluster

Based on the usage phase of the cluster, the billing for each phase is as follows.

Usage Period	Billing Mode	Required Duration	Configuration	Unit price	Price*
March 18, 2023, 15:30:00 to March 18, 2023, 17:30:00	Pay-per-use	2 hours	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Cluster scale: 50 worker nodes</li> <li>HA mode</li> </ul>	\$0.42 USD/hour	$2 \times 0.42 = \$0.84 \text{ USD}$
March 18, 2023, 17:30:00 to March 19, 2023, 8:30:00	Pay-per-use	0 hours (Bills will not be generated for the management of a hibernated cluster.)	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Cluster scale: 50 worker nodes</li> <li>HA mode</li> </ul>	\$0.42 USD/hour	\$0 USD
March 19, 2023, 08:30:00 to March 20, 2023, 10:30:00	Pay-per-use	26 hours	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Cluster scale: 50 worker nodes</li> <li>HA mode</li> </ul>	\$0.42 USD/hour	$26 \times 0.42 = \$10.92 \text{ USD}$
March 20, 2023, 10:30:00 to March 20, 2023, 11:00:00	Pay-per-use	0.5 hour	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Cluster scale: 200 worker nodes</li> <li>HA mode</li> </ul>	\$0.87 USD/hour	$0.5 \times 0.87 = \$0.43 \text{ USD}$

Usage Period	Billing Mode	Required Duration	Configuration	Unit price	Price*
March 20, 2023, 11:00:00 to April 20, 2023, 23:59:59	Yearly/ Monthly	One month	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Cluster scale: 200 worker nodes</li> <li>HA mode</li> </ul>	\$460.39 USD/month	\$460.39 USD

 **NOTE**

\*In pay-per-use billing mode, the amount due is truncated to the 2nd decimal place. This amount may vary depending on the actual bill.

The total price of the cluster is  $0.84 + 10.92 + 0.43 + 460.39 = \$472.58$  USD.

### Billing Analysis of a Node

Based on the usage phase of the nodes, the billing for each phase is as follows:

Usage Period	Billing Mode	Required Duration	Configuration	Unit price	Price*
March 18, 2023, 15:40:00 to March 18, 2023, 17:30:00	Pay-per-use	1 hour and 50 minutes	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Specifications: c7.large.2 2 vCPUs   4 GiB</li> <li>System disk: General Purpose SSD   50 GiB</li> <li>Data disk: General Purpose SSD   100 GiB</li> <li>EIP bandwidth: 6 Mbit/s, billed by bandwidth</li> </ul>	<ul style="list-style-type: none"> <li>Specifications: \$0.1016 USD/hour</li> <li>EVS disk: \$0.0825 USD/hour</li> <li>EIP bandwidth: \$0.1068 USD/hour</li> </ul>	<ul style="list-style-type: none"> <li>Specifications: <math>1.83 \times 0.1016 = \\$0.18</math> USD</li> <li>EVS disk: <math>1.83 \times 0.0825 = \\$0.15</math> USD</li> <li>EIP bandwidth: <math>1.83 \times 0.1068 = \\$0.19</math> USD</li> <li>Total: \$0.52 USD</li> </ul>

Usage Period	Billing Mode	Required Duration	Configuration	Unit price	Price*
March 18, 2023, 17:30:00 to March 19, 2023, 08:30:00	Pay-per-use	16 hours (The node is stopped.)	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Specifications: c7.large.2 2 vCPUs   4 GiB</li> <li>System disk: General Purpose SSD   50 GiB</li> <li>Data disk: General Purpose SSD   100 GiB</li> <li>EIP bandwidth: 6 Mbit/s, billed by bandwidth</li> </ul>	<ul style="list-style-type: none"> <li>Specifications: \$0 USD/hour (Bills will not be generated for the stopped nodes.)</li> <li>EVS disk: \$0.0825 USD/hour</li> <li>EIP bandwidth: \$0.1068 USD/hour</li> </ul>	<ul style="list-style-type: none"> <li>Specifications: \$0 USD</li> <li>EVS disk: 16 x 0.0825 = \$1.32 USD</li> <li>EIP bandwidth: 16 x 0.1068 = \$1.70 USD</li> </ul> <p>Total: \$3.02 USD</p>
March 19, 2023, 08:30:00 to March 19, 2023, 09:40:00	Pay-per-use	1 hour and 10 minutes	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Specifications: c7.large.2 2 vCPUs   4 GiB</li> <li>System disk: General Purpose SSD   50 GiB</li> <li>Data disk: General Purpose SSD   100 GiB</li> <li>EIP bandwidth: 6 Mbit/s, billed by bandwidth</li> </ul>	<ul style="list-style-type: none"> <li>Specifications: \$0.1016 USD/hour</li> <li>EVS disk: \$0.0825 USD/hour</li> <li>EIP bandwidth: \$0.1068 USD/hour</li> </ul>	<ul style="list-style-type: none"> <li>Specifications: 1.17 x 0.1016 = \$0.11 USD</li> <li>EVS disk: 1.17 x 0.0825 = \$0.09 USD</li> <li>EIP bandwidth: 1.17 x 0.1068 = \$0.12 USD</li> </ul> <p>Total: \$0.32 USD</p>

Usage Period	Billing Mode	Required Duration	Configuration	Unit price	Price*
March 19, 2023, 09:40:00 to March 20, 2023, 11:10:00	Pay-per-use	25 hours and 30 minutes	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Specifications: c7.xlarge.2 4 vCPUs   8 GiB</li> <li>System disk: General Purpose SSD   50 GiB</li> <li>Data disk: General Purpose SSD   100 GiB</li> <li>EIP bandwidth: 6 Mbit/s, billed by bandwidth</li> </ul>	<ul style="list-style-type: none"> <li>Specifications: \$0.1732 USD/hour</li> <li>EVS disk: \$0.0825 USD/hour</li> <li>EIP bandwidth: \$0.1068 USD/hour</li> </ul>	<ul style="list-style-type: none"> <li>Specifications: 25.5 x 0.1732 = \$4.41 USD</li> <li>EVS disk: 25.5 x 0.0825 = \$2.10 USD</li> <li>EIP bandwidth: 25.5 x 0.1068 = \$2.72 USD</li> </ul> <p>Total: \$9.23 USD</p>
March 20, 2023, 11:10:00 to April 20, 2023, 23:59:59	Yearly/Monthly	One month	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Specifications: c7.xlarge.2 4 vCPUs   8 GiB</li> <li>System disk: General Purpose SSD   50 GiB</li> <li>Data disk: General Purpose SSD   100 GiB</li> <li>EIP bandwidth: 6 Mbit/s, billed by bandwidth</li> </ul>	<ul style="list-style-type: none"> <li>Specifications: \$91.03 USD/month</li> <li>EVS disk: \$33.00 USD/month</li> <li>EIP bandwidth: \$51.30 USD/month</li> </ul>	<p>Total: \$175.33 USD</p>

 **NOTE**

\*In pay-per-use billing mode, the amount due is truncated to the 2nd decimal place. This amount may vary depending on the actual bill.

The total price of the node is  $0.52 + 3.02 + 0.32 + 9.23 + 175.33 = \$188.42$  USD.



## Billing Analysis of a Load Balancer

Based on the use phase of the load balancer, the billing is as follows.

Usage Period	Billing Mode	Billing Factor	Configuration	Unit price	Price*
March 19, 2023, 09:20:00 to March 20, 2023, 10:20:00	Pay-per-use	25 hours, 5 GB public network traffic	<ul style="list-style-type: none"> <li>Region: EU-Dublin</li> <li>Type: Dedicated load balancer</li> <li>AZ: single AZ</li> <li>Specifications: network load balancing (TCP/UDP), small I (10 LCUs)</li> <li>EIP bandwidth: 5 Mbit/s, billed by traffic</li> </ul>	<ul style="list-style-type: none"> <li>Instance price: \$0.695 USD/hour</li> <li>Public network traffic price: \$0.0855 USD/GB</li> </ul>	<ul style="list-style-type: none"> <li>Instance price: 25 x 0.0695 = \$1.73 USD</li> <li>Public network traffic price: 5 x 0.0855 = \$0.42 USD</li> </ul> <p>Total: \$2.15 USD</p>

### NOTE

\*In pay-per-use billing mode, the amount due is truncated to the 2nd decimal place. This amount may vary depending on the actual bill.

The total price for the load balancer is \$2.15 USD.

# 5 Modifying Resource Specifications

---

If a yearly/monthly resource no longer meets your needs, you can modify the specifications.

- **Modifying cluster specifications:** You can modify the cluster specifications on the CCE console. During the modification, the price is calculated based on the following rules:
  - If you upgrade the cluster specifications, you need to pay the difference in price.
  - Downgrading cluster specifications is not supported.
- **Modifying node specifications:** The specifications can only be modified on the ECS console. After the modification, go to the CCE console and [synchronize data with cloud servers](#). The system will recalculate the price and either bill or refund you the difference.
  - If you upgrade your node specifications, you need to pay the difference in price.
  - If you downgrade your node specifications, Huawei Cloud will refund you the difference.

You are not advised to downgrade your ECS to a lower specification because ECS performance may be affected.

## Modifying the Specifications of a Yearly/Monthly Resource

When you modify the specifications, the price is calculated as follows:

**Specifications modification price = (Price of the new specifications - Price of the original specifications) x Remaining period**

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

Suppose you purchased a yearly/monthly cluster with 50 worker nodes and three master nodes on April 8, 2023 without any discount and upgraded the cluster scale to 200 worker nodes on April 18, 2023. The price of the original specifications is \$244.89 USD/month, and the price of the new specifications is \$460.39 USD/month.

In this example, the number of remaining days in the original order totals 20. The number of remaining days in April are 12 and those in May are 8. The remaining period is calculated as follows:

$$\text{Remaining period} = 12 \text{ (Remaining days in April)} / 30 \text{ (Maximum number of days in April)} + 8 \text{ (Remaining days in May)} / 31 \text{ (Maximum number of days in May)} = 0.6581$$
$$\text{Specifications modification price} = (460.39 - 244.89) \times 0.6581 = \$141.82 \text{ USD}$$

If other yearly/monthly cloud service resources are used in your clusters, modify the specifications on their respective consoles. For more details, see [Pricing of a Changed Specification](#).

## Modifying the Specifications of a Pay-per-Use Resource

If you purchased a pay-per-use cluster and then modified its specifications, a new order will be generated. The old order automatically becomes invalid.

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

For example, if you purchased a pay-per-use cluster with 50 worker nodes at 09:00:00 and upgraded the scale to 200 worker nodes at 09:30:00, two records will be generated from 09:00:00 to 10:00:00.

- 09:00:00 to 09:30:00. You are billed for 50 worker nodes.
- 09:30:00 to 10:00:00. You are billed for 200 worker nodes.

# 6 Billing Mode Changes

## 6.1 Overview

You can change the billing mode later if it no longer meets your needs.

- **Pay-per-use:** On the CCE console, you can change the billing mode of clusters and nodes from pay-per-use to yearly/monthly, as shown in [Table 6-1](#).
- **Yearly/Monthly:** Yearly/monthly clusters and nodes can be changed to pay-per-use ones only after they expire. For details, see [Yearly/Monthly to Pay-per-Use](#). Yearly/Monthly resources cannot be deleted after being created. To stop using them, go to **Billing Center** and unsubscribe from them.

You can change the billing modes of other cloud service resources on their respective consoles. For details, see their billing descriptions.

### NOTICE

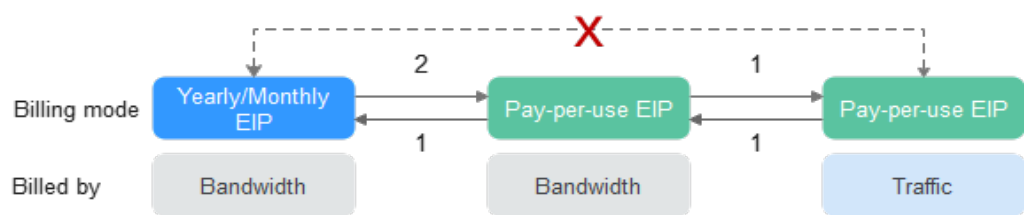
The billing modes of nodes cannot be changed on the ECS console.

**Table 6-1** Changeable CCE billed items

Billed Item	Change Description
Cluster	When changing the billing mode of a cluster, pay-per-use nodes in the cluster can be changed to yearly/monthly nodes.
ECS	<b>ECS flavor</b> When changing the billing mode of a node, the billing mode of resources like computing resources (vCPUs and memory) and system disk will also be changed. You can change the billing mode from pay-per-use to yearly/monthly to get a price discount.

Billed Item	Change Description
	<p><b>EVS disks (including system disks and data disks)</b> The billing mode of the system disks and data disks attached to a node cannot be changed on the EVS console. You need to change their billing modes together with the node on the CCE console.</p>
	<p><b>EIP</b> When you change the billing mode of a node to yearly/monthly on the CCE console, the EIP's billing mode will also be changed to yearly/monthly. If the billing mode of the EIP bound to a node cannot be changed to yearly/monthly, changing the billing mode of the node will not change that of the EIP. You need to change the billing mode of the EIP on the EIP console.</p> <p>The rules for changing the EIP billing mode are as follows:</p> <ul style="list-style-type: none"> <li>• A yearly/monthly EIP can be changed to a pay-per-use EIP billed by bandwidth after the yearly/monthly subscription ends.</li> <li>• A pay-per-use EIP billed by bandwidth can be changed to a yearly/monthly EIP.</li> <li>• Pay-per-use EIPs billed by bandwidth can be changed to pay-per-use EIPs billed by traffic, and pay-per-use EIPs billed by traffic can be changed to pay-per-use EIPs billed by bandwidth.</li> </ul>

Figure 6-1 EIP billing mode change



1: The change takes effect immediately.  
 2: The change takes effect only after the yearly/monthly subscription period expires.  
 x: The billing mode cannot be changed.

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

If you have a pay-per-use CCE cluster or node 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 you purchased 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. An order was

created. After you paid for the order, yearly/monthly billing was applied immediately. In **Billing Center**, on the **Billing** page, three line items were 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 on April 18, 2023
- A single, yearly/monthly expenditure generated on April 18, 2023, 16:30:30

## Constraints

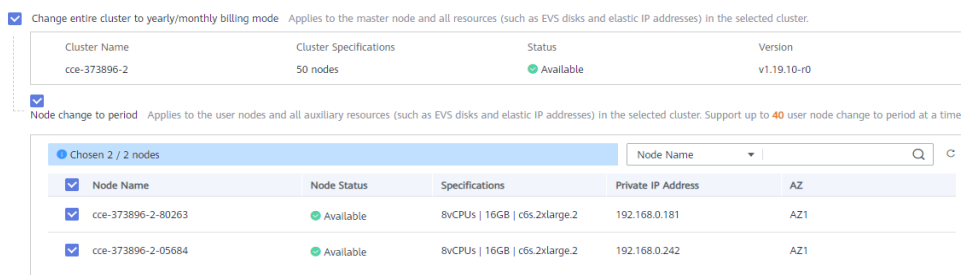
- A pay-per-use node cannot be changed to a yearly/monthly one on the ECS console.
- Only nodes in the default node pool can be changed to the yearly/monthly billing mode.
- Nodes whose billing mode is changed to yearly/monthly do not support auto scaling.

## Changing the Billing Mode of a Cluster

To change the billing mode of a cluster from pay-per-use to yearly/monthly, perform the following steps:

- Step 1** Log in to the CCE console. In the navigation pane, choose **Clusters**.
- Step 2** Locate the target cluster, and click **Change Billing Mode** in the upper right corner.
- Step 3** On the **Change Billing Mode** page, select the target cluster. You can also select the nodes whose billing mode you want to change.

**Figure 6-2** Changing the billing mode of a cluster to yearly/monthly



- Step 4** Click **OK**. Wait until the order is processed and the payment is complete.

----End

## Changing the Billing Mode of a Node

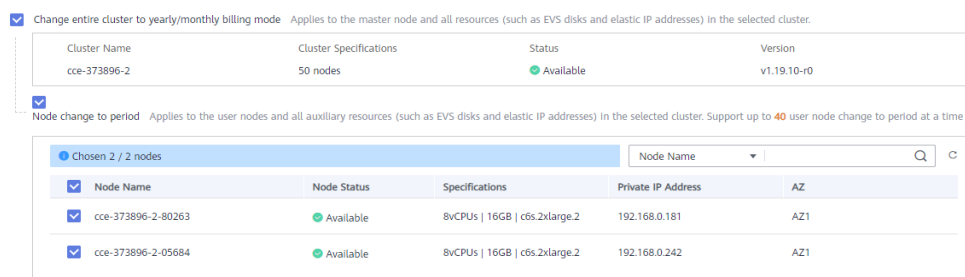
### NOTICE

The billing modes of resources like EVS disks and EIPs used by pay-per-use nodes cannot be changed simultaneously. For details, see .

To change the billing mode of a pay-per-use node to yearly/monthly, perform the following steps:

- Step 1** Log in to the CCE console and click the cluster name to access the cluster console.
- Step 2** In the navigation pane, choose **Nodes**. Locate the target node and choose **More > Change Billing Mode** in the **Operation** column.
- Step 3** On the **Change Billing Mode** page, select the target node. The billing mode of a maximum of 40 nodes can be changed at a time.

**Figure 6-3** Changing the billing mode of a node to yearly/monthly



- Step 4** Click **OK**. Wait until the order is processed and the payment is complete.

----End

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

After creating a yearly/monthly cluster or node, you can change it to a pay-per-use cluster or node for more flexibility.

### NOTE

The pay-per-use billing takes effect only after the yearly/monthly subscription expires.

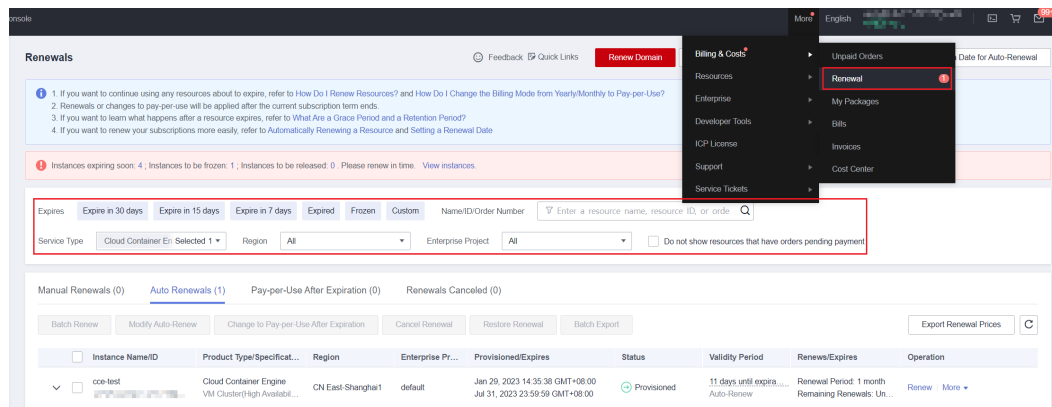
## Prerequisites

The billing mode can only be changed from yearly/monthly to pay-per-use for a CCE cluster or node whose order status is **Provisioned**. You can view the order status on the **Billing & Costs > Renewal** page.

## Procedure

- Step 1** Log in to the CCE 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** Customize the search criteria.
  - On the **Pay-per-Use After Expiration** tab, you can search for the resources with the billing mode changed to pay-per-use.
  - On the **Manual Renewals**, **Auto Renewals**, and **Renewals Canceled** tabs, you can also change the billing mode of the resources to pay-per-use billing upon expiration.

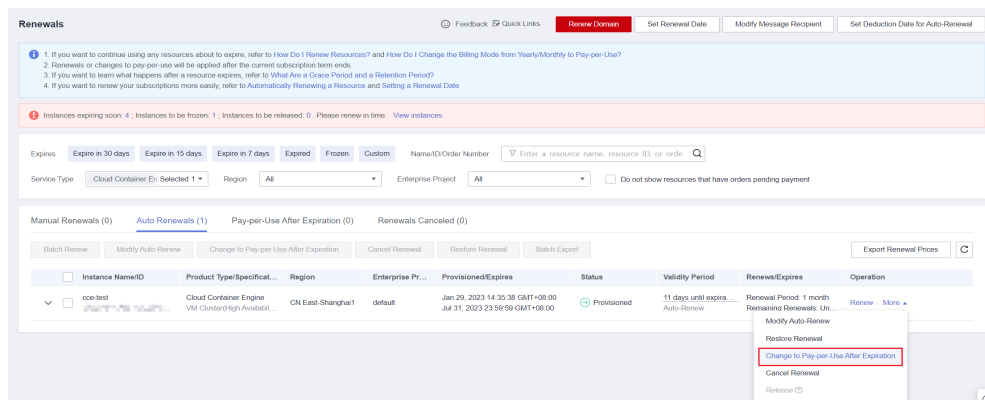
Figure 6-4 Renewals



**Step 4** Change a yearly/monthly cluster or node to pay-per-use billing upon expiration.

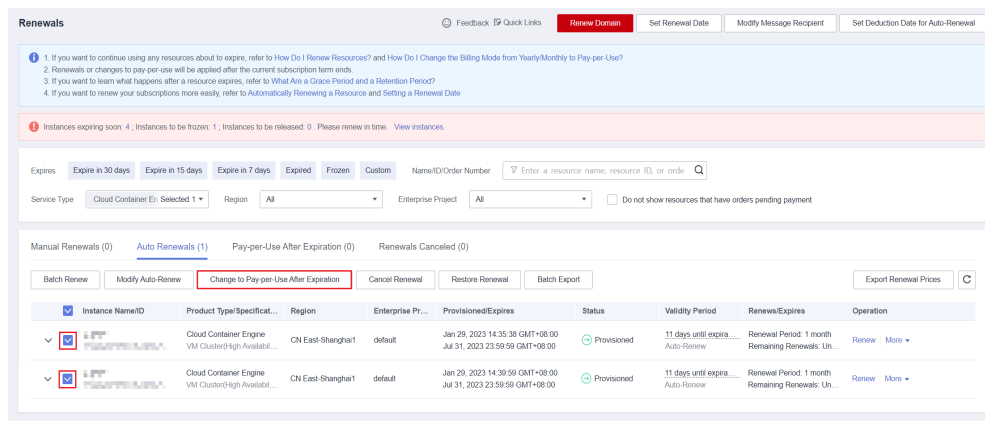
- Single cluster or node: Select the cluster or node whose billing mode you want to change and choose **More > Change to Pay-per-Use After Expiration** in the **Operation** column.

Figure 6-5 Changing to pay-per-use billing upon expiration for a cluster or node



- Multiple clusters or nodes: Select the cluster or node whose billing mode you want to change and click **Change to Pay-per-Use After Expiration** above the list.

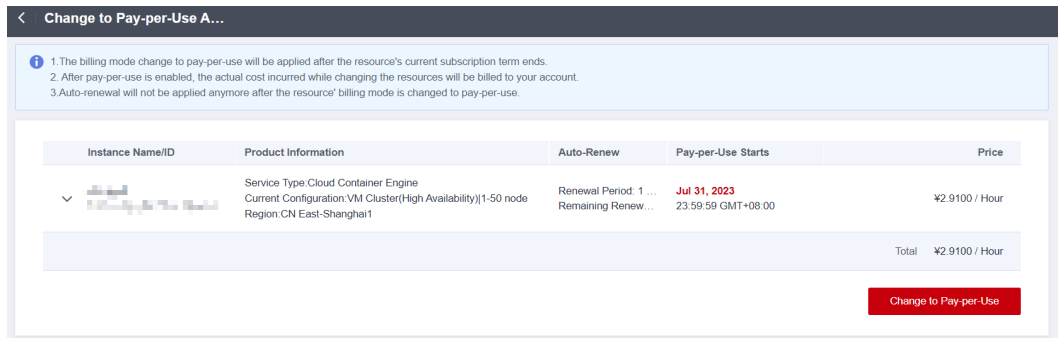
Figure 6-6 Changing to pay-per-use billing upon expiration for multiple clusters or nodes





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

**Figure 6-7** Changing to pay-per-use billing upon expiration



----End

# 7 Renewing Subscriptions

## 7.1 Overview

### When to Renew Subscriptions

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

Only yearly/monthly CCE clusters or nodes can be renewed. If you use pay-per-use CCE clusters or nodes, just ensure that you have a top-up account with a sufficient balance.

If you renew the cluster or node before it expires, resources will be retained and you can continue using them. For details about the statuses of yearly/monthly resources after they expire, see [Impact of Expiration](#).

### How to Renew Subscriptions

Only yearly/monthly CCE clusters and nodes can be renewed on the CCE console. This section describes how to renew such clusters and nodes, as shown in [Table 7-1](#).

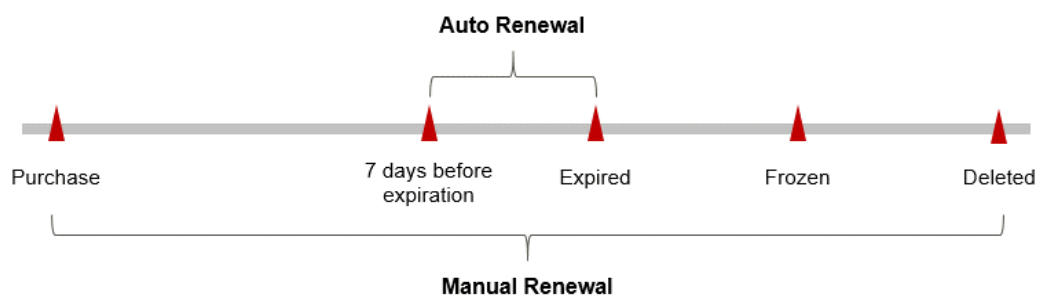
**Table 7-1** Renewing a yearly/monthly cluster or node

Method	Billed Item	Description
<a href="#">Manually Renewing a CCE Resource</a>	Cluster	You can renew a yearly/monthly cluster on the console at any time before it is automatically deleted.
	ECS	You can renew a yearly/monthly node on the console at any time before it is automatically deleted.

Method	Billed Item	Description
<b>Automatically Renewing a CCE Resource</b>	Cluster	You can enable auto-renewal to automatically renew a cluster before it expires. This prevents resources from being deleted in case you forget to renew a subscription.
	ECS	You can enable auto-renewal to automatically renew a node 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 or node based on the phase it is currently in.

**Figure 7-1** Selecting a renewal method based on the current phase of a cluster or node



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

**NOTE**

Once a yearly/monthly subscription has expired or a pay-per-use resource becomes in arrears, Huawei Cloud provides a period of time during which you can renew or top up your accounts. For details, see [What Is a Grace Period of Huawei Cloud? How Long Is It?](#) [What Is a Retention Period of Huawei Cloud? How Long Is It?](#)


You can enable auto-renewal anytime before a cluster or a node expires. 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.

## 7.2 Manually Renewing a CCE Resource

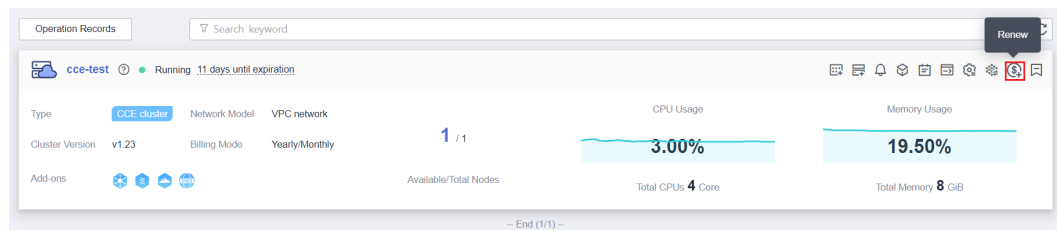
You can renew a yearly/monthly cluster or node anytime on the CCE console before it is automatically deleted.

### Renewing a Cluster on the Console

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

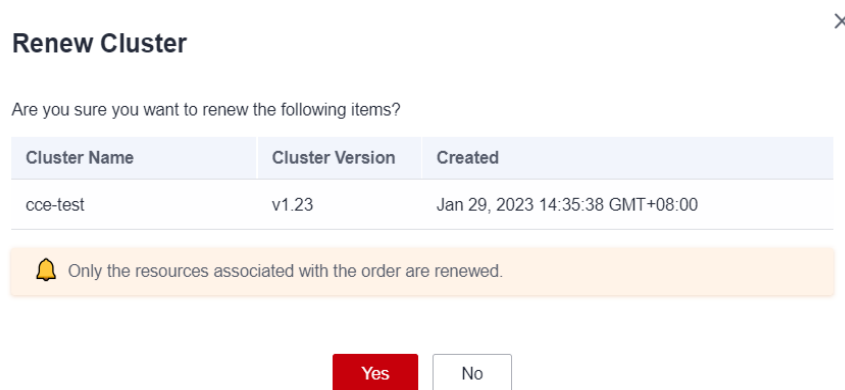
**Step 2** On the cluster list page, click  in the upper right corner of the target cluster.

**Figure 7-2** Renewing a yearly/monthly cluster



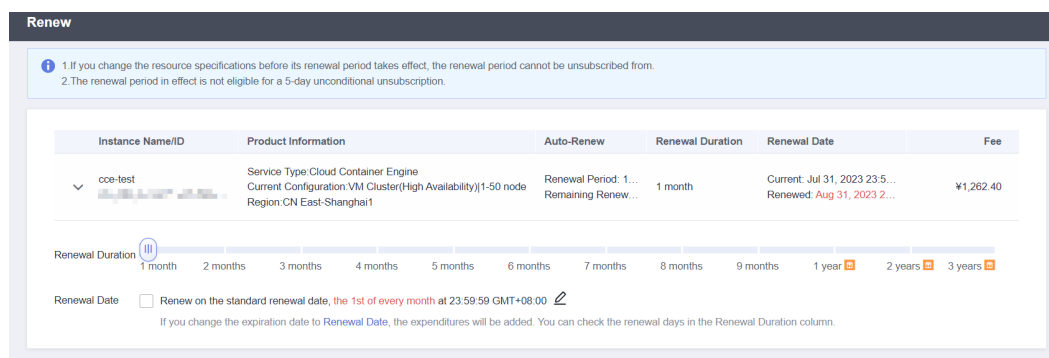
**Step 3** On the **Renew Cluster** page, confirm the information and click **Yes**.

**Figure 7-3** Renewing the cluster



**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 7-4** Confirming renewal



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

----End

## Renewing a Node on the Console

**Step 1** Log in to the CCE console and click the cluster name to access the cluster console.

**Step 2** In the navigation pane, choose **Nodes**. Click the name of the node to be renewed, and click **OK** to go to the cloud server details page on the cloud server console.

**Step 3** On the page displayed, choose **More > Renew** in the upper right corner.

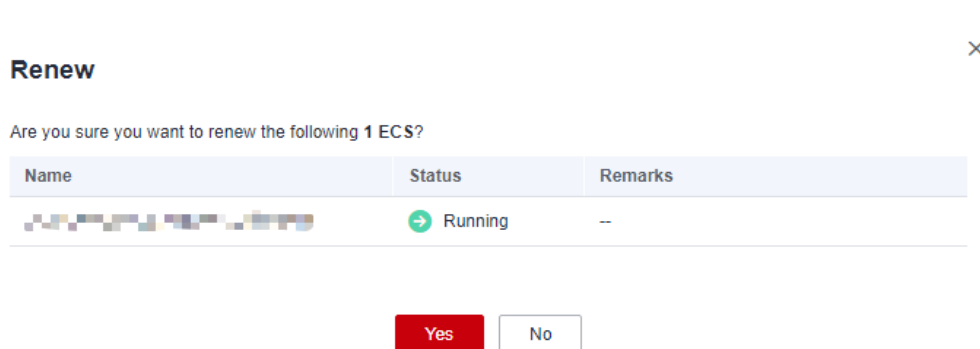
### NOTE

You can renew multiple yearly/monthly ECSs at a time. The procedure is as follows:

1. Log in to the ECS console.
2. On the **Elastic Cloud Server** page, select the yearly/monthly ECS to be renewed.
3. On the top of the list, choose **More > Renew**.

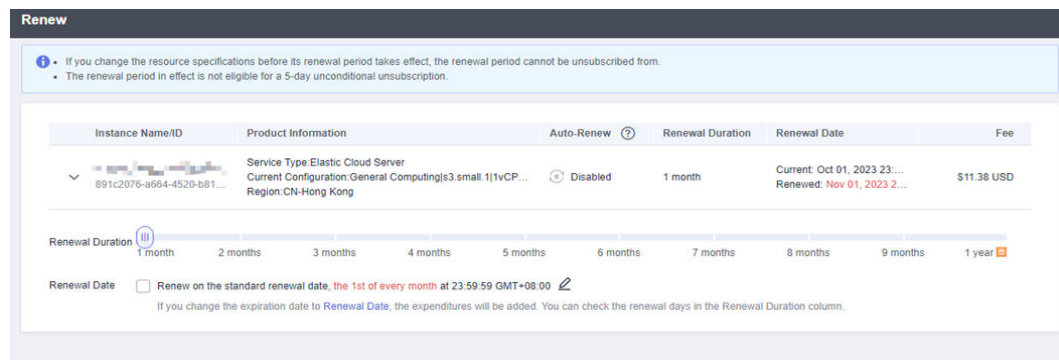
**Step 4** In the displayed **Renew** dialog box, confirm the information and click **Yes**.

**Figure 7-5** Renewing the ECS



**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 7-6 Confirming renewal



**Step 6** Select a payment method and make your payment. Once the order is paid, the renewal is complete.

----End

## Renewing a Subscription in Billing Center

This method is suitable for all resources, including clusters, nodes, EVS disks, and EIPs.

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

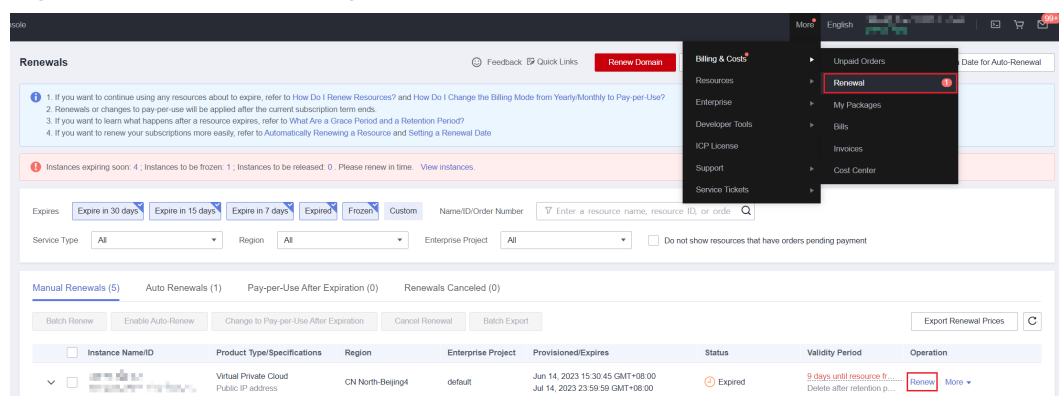
**Step 2** Hover over **Billing & Costs** in the upper part of the console and choose **Renewal** from the drop-down list.

The **Renewals** page is displayed.

**Step 3** Customize the search criteria.

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

Figure 7-7 Renewal management

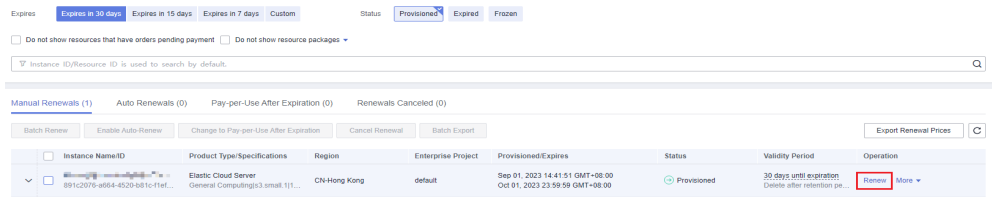


You can move all resources that need to be manually renewed to the **Manual Renewals** tab. For details, see [Restoring to Manual Renewal](#).

**Step 4** Manually renew resources.

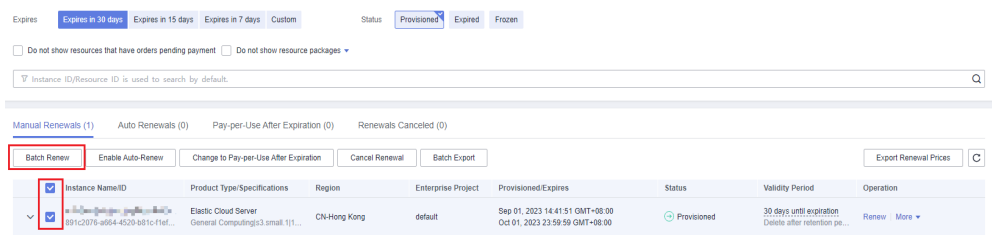
- Individual renewal: Click **Renew** in the **Operation** column for the desired resource.

Figure 7-8 Individual renewal



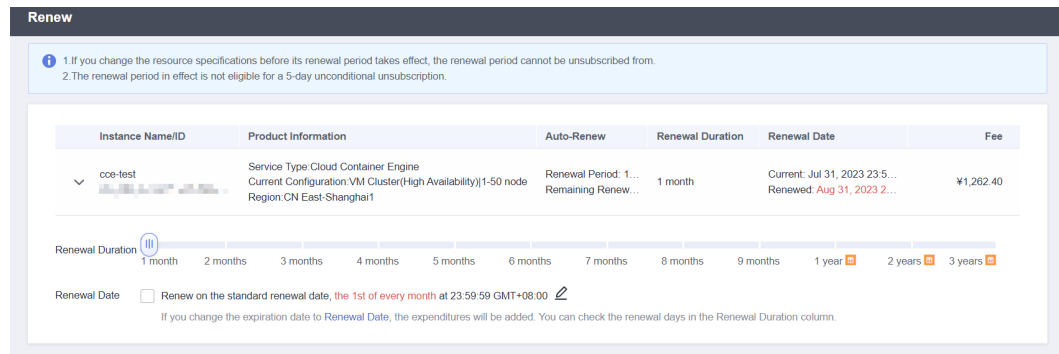
- Batch renewal: Check the boxes for the desired resources, and click **Batch Renew** in the upper left corner.

Figure 7-9 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 7-10 Confirming renewal



- Step 6** Select a payment method and make your payment. Once the order is paid, the renewal is complete.

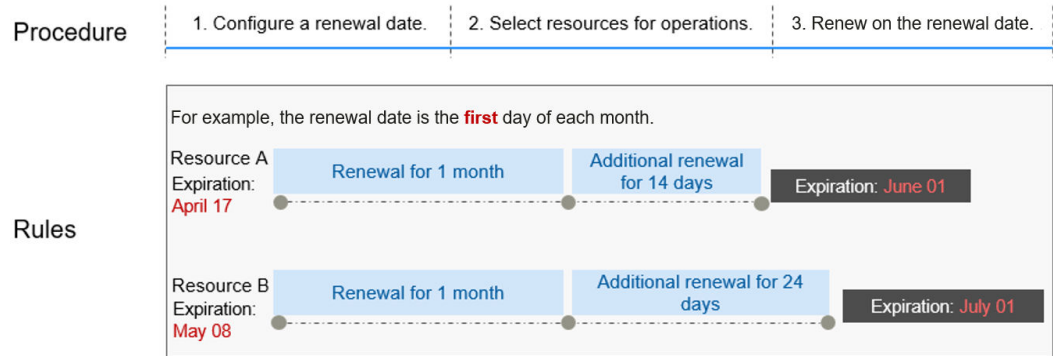
----End

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

If the resources have different expiry dates or the ECSs and attached EVS disks 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 7-11](#), a user sets the same renewal day for two resources that will expire at different dates.

**Figure 7-11** Setting the same renewal day for resources with different expiry dates



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

## 7.3 Automatically Renewing a CCE Resource

Auto-renewal can prevent CCE clusters or nodes 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 or node expires and the billed usage period.
- The auto-renewal period of a cluster or a node depends on the subscription term. For example, if you select 3-month renewal duration, your cluster or node is automatically renewed for three months before each expiration.
- You can enable auto-renewal anytime before a cluster or a node expires. The system will make the first attempt to charge your account for the renewal at 03:00, seven days before the expiry date. If this attempt fails, it will make another attempt at 03:00 every day until the subscription is renewed or expires.
- After auto-renewal is enabled, you can still renew the cluster or node manually if you want to. After a manual renewal is complete, auto-renewal is still valid, and the renewal fee will be deducted from your account seven days before the new expiry date.
- By default, the renewal fee is deducted from your account seven days before the new expiry date. You can change this auto-renewal payment date as required.

For more information about auto-renewal rules, see [Auto-Renewal Rules](#).

### Prerequisites

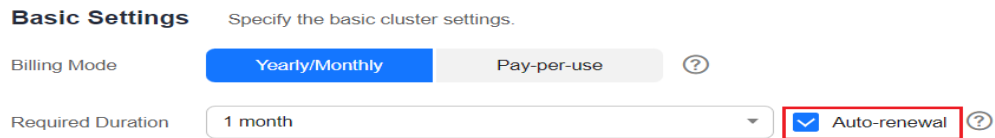
The yearly/monthly cluster or node is not expired.

### Enabling Auto-Renewal During Purchase

You can enable auto-renewal on the **Buy CCE Cluster** or **Create Node** page, as shown in [Figure 7-12](#).



**Figure 7-12** Enabling auto-renewal



Auto-renewal enabled when you purchase a cluster or node complies with the following rules:

- 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

This method is suitable for all resources, including clusters, nodes, EVS disks, and EIPs.

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

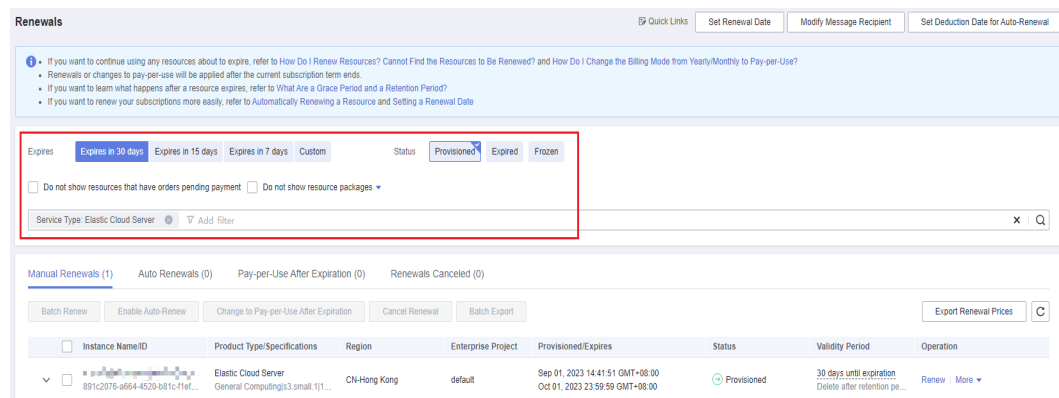
**Step 2** Hover over **Billing & Costs** in the upper part of the console and choose **Renewal** from the drop-down list.

The **Renewals** page is displayed.

**Step 3** Customize the search criteria.

- On the **Auto Renewals** tab, 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** tabs.

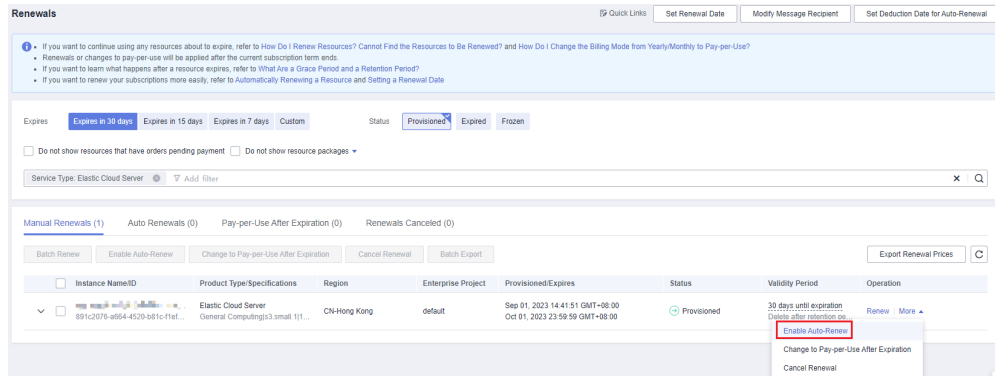
**Figure 7-13** Renewals



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

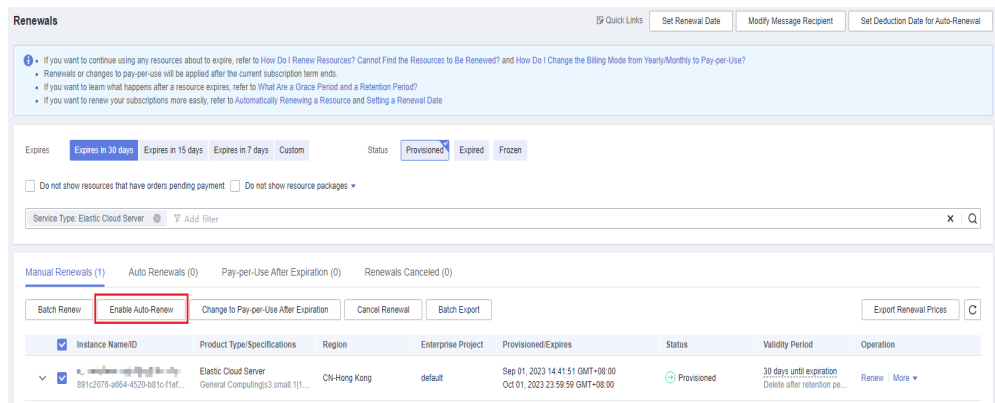
- Enabling auto-renewal for a single resource: Select the resource for which you want to enable auto-renewal and choose **More > Enable Auto-Renew** in the **Operation** column.

**Figure 7-14** Enabling auto-renewal for a single resource



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

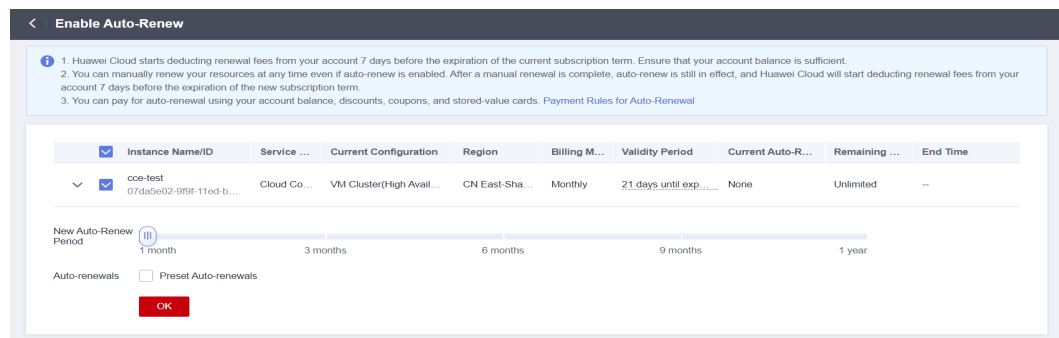
**Figure 7-15** Enabling auto-renewal for multiple resources



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

If auto-renewal is enabled on the **Renewals** page, the auto-renewal period is subject to the selected renewal period and number of auto-renewals. For example, if you select 3-month renewal duration and do not select **Preset Auto-renewals**, your subscription is automatically renewed for three months before each expiration.

**Figure 7-16** Enabling auto-renewal



----End

# 8 Bills

---

You can view the resource usage and bills for a different billing cycle on the [Billing](#) page in **Billing Center**.

## Bill Generation

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

A pay-per-use resource is billed by the hour, day, or month, depending on the resource's usage type. . The CCE resource usage is billed by the hour.

You are not charged immediately after a record is generated. For example, if a pay-per-use ECS (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, but you will not 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.

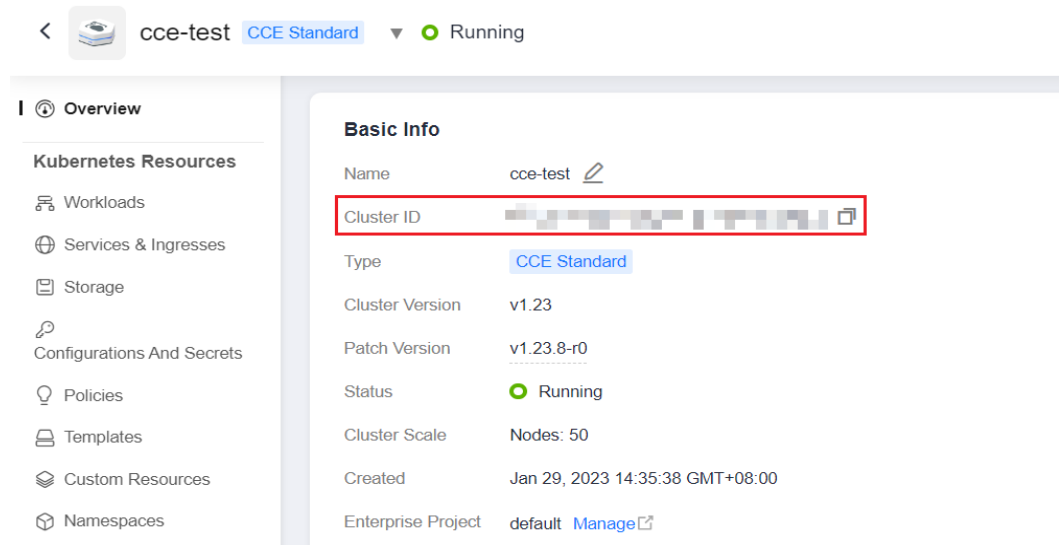
## Viewing Bills of a Specific Resource

This section uses a CCE cluster as an example to describe how to view the bill of a specified resource.

**Step 1** Log in to the CCE console and click the cluster name to access the cluster console.


**Step 2** On the cluster details page, copy the cluster ID.

**Figure 8-1** Obtaining the cluster ID

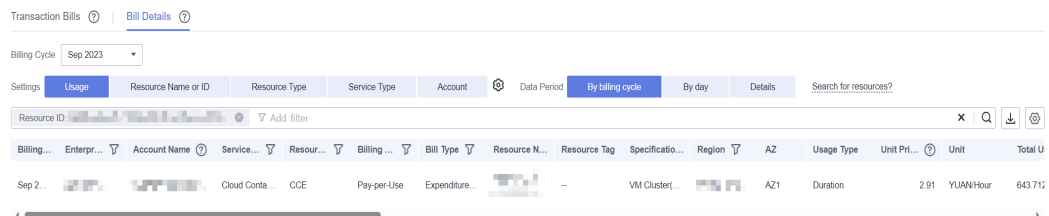


**Step 3** On the top menu bar, choose **Billing & Costs > Bills**.

The **Billing** page is displayed.

**Step 4** On the **Bill Details** tab, select **Resource ID** as the filter condition, enter the obtained resource ID, and click the  icon.

**Figure 8-2** Searching for a bill



In this example, the bill details are displayed by usage and billing cycle. You can also select other statistical dimensions or periods.

-----End

## Checking the Consistency of the Actual Usage and Billed Usage

Assume that you purchased a pay-per-use cluster with 50 worker nodes and multiple master nodes at 10:09:06 on April 08, 2023 and deleted it at 12:09:06 on April 08, 2023.

- Transaction Records

Pay-per-use CCE clusters are calculated by the second but billed every hour. You can check the transaction records against the actual usage. For details, see [Table 8-1](#).

**Table 8-1** Cluster transaction records

<b>Service Type</b>	Cloud Container Engine (CCE)
<b>Resource Type</b>	CCE
<b>Billing Mode</b>	Pay-per-Use
<b>Expenditure Time</b>	<p>For the period of time from 10:09:06 to 12:09:06, three transaction records would be generated for the resource usage in the following periods:</p> <ul style="list-style-type: none"> <li>• 2023/04/08 10:09:06 - 2023/04/08 11:00:00</li> <li>• 2023/04/08 11:00:00 - 2023/04/08 12:00:00</li> <li>• 2023/04/08 12:00:00 - 2023/04/08 12:09:06</li> </ul>
<b>List Price</b>	<p>List price on the official website = Unit price of the cluster flavor x Required duration</p> <p>In this example, the cluster was used for 3,054 seconds in the first period. If the unit price is \$0.42 USD/hour, the list price is calculated as follows: <math>0.42 \times (3054/3600) = \\$0.3563</math> USD. Similarly, you can calculate the list price for the other periods. For details, see <a href="#">CCE Pricing Details</a>.</p>
<b>Discounted Amount</b>	Discounts offered for cloud services, for example, commercial discounts, partner authorized discounts, and promotional discounts. It is the discounted amount based on the list price.
<b>Truncated Amount</b>	<p>Huawei Cloud billing is calculated to the 8th decimal place. However, the amount due is truncated to the 2nd decimal place. The third and later decimal places are referred to as the truncated amounts.</p> <p>Take the first period as an example. The truncated amount is \$0.0063 USD.</p>
<b>Amount Due</b>	<p>Amount due = List price - Discount amount - Truncated amount</p> <p>Take the first period as an example. If the discount amount is 0, the amount due is \$0.35 USD (<math>0.3563 - 0 - 0.0063</math>).</p>

- CCE bill details

Bill details can display in multiple ways. By default, the bill details of a resource are displayed by usage and by billing cycle. [Table 8-2](#) illustrates the CCE bill details, which can be used to check against the actual usage.

**Table 8-2** Cluster bill details

<b>Service Type</b>	Cloud Container Engine (CCE)
---------------------	------------------------------

<b>Resource Type</b>	CCE
<b>Billing Mode</b>	Pay-per-use
<b>Resource Name/ID</b>	Specific cluster name and ID. Example: cce-test, 4cdeb1cd-7071-4890-9ce4-e6c2299e960e
<b>Specifications</b>	Cluster scale and HA Example, VM Cluster (High Availability)   1-50 nodes
<b>Usage Type</b>	Duration for a pay-per-use CCE cluster
<b>Unit Price</b>	When pay-per-use billing is used, the unit price is only provided if the amount is equal to the usage multiplied by the unit price. No unit price is provided in other pricing modes, for example, tiered pricing. Pay-per-use clusters are priced in the simple mode. For details, see <a href="#">CCE Pricing Details</a> .
<b>Unit</b>	CNY/hour
<b>Usage</b>	Depends on the unit of the unit price, which, for a CCE cluster, is CNY/hour. Cluster usage is billed by the hour. In this example, the total usage is 2 hours.
<b>Usage Unit</b>	Hour
<b>List Price</b>	List price on the official website = Unit price of the cluster flavor x Required duration In this example, the cluster was used for 2 hours. If the unit price is \$0.42 USD/hour, the list price is calculated as follows: $0.42 \times 2 = \$0.84$ USD.
<b>Discounted Amount</b>	Discounts offered for cloud services, for example, commercial discounts, partner authorized discounts, and promotional discounts. It is the discounted amount based on the list price.
<b>Amount Due</b>	Amount that should be paid for used cloud services after discounts are applied.

# 9 Arrears

When the settlement period of your cloud services ends, bills are generated and costs are deducted from your account. If there is not enough balance in your account, your account will be in arrears. If you want to continue using your cloud services, you will need to top up your account in a timely manner.

## Impact of Arrears

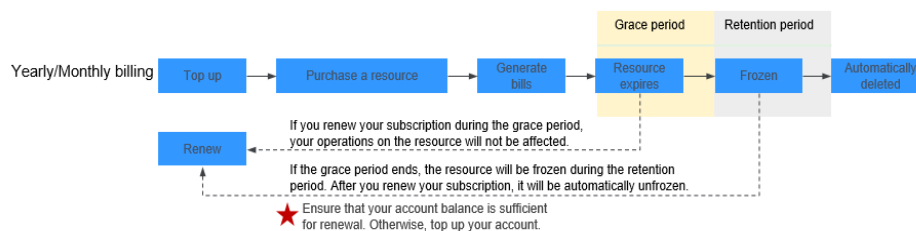
### NOTE

Once a yearly/monthly subscription has expired or a pay-per-use resource becomes in arrears, Huawei Cloud provides a period of time during which you can renew or top up your accounts. For details, see [What Is a Grace Period of Huawei Cloud? How Long Is It?](#) [What Is a Retention Period of Huawei Cloud? How Long Is It?](#)

- Yearly/Monthly

This is a pre-paid billing mode, so you can continue using yearly/monthly CCE resources even if your account is in arrears. However, you cannot perform operations such as purchasing clusters, upgrading the cluster specifications, or renewing CCE resources, because they will generate new expenditures.

**Figure 9-1** Lifecycle of a yearly/monthly resource



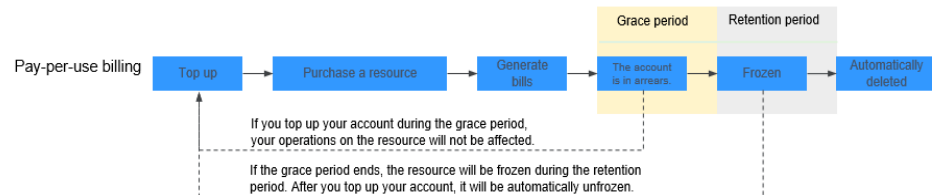
- Pay-per-Use

If there is no top-up account with sufficient balance and no other payment method configured to pay for the resources used, your account goes into arrears, and the pay-per-use CCE resources enter the grace period. You are still responsible for expenditures generated during the grace period. You can view the charges on the **Overview** page in **Billing Center** and pay any past due balance as needed.

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, CCE clusters and resources like nodes, EVS disks, and EIPs will be released and cannot be restored.

**Figure 9-2** Lifecycle of a pay-per-use CCE resource



## 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 .

If the cluster is no longer needed, you can delete it and other cloud service resources in the cluster to avoid further expenditures.

In **Billing Center**, enable **Balance Alert** on the **Overview** page. Then, anytime an expenditure quota drops to below the threshold you specify, Huawei Cloud automatically notifies you by SMS or email.

If your account is in arrears, top up your account in time. If the resource usage becomes stable, you can purchase yearly/monthly resources to reduce costs. For details, see [Yearly/Monthly Billing](#).



# 10 Billing Termination

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If you no longer need cloud service resources, you can unsubscribe from or delete them to stop the billing.

## Yearly/Monthly Resources

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

- If a yearly/monthly resource is no longer needed before the subscription expires, you can unsubscribe from it. The system will return a certain amount of money to your account based on whether the resource is subject to the five-day unconditional unsubscription or whether cash coupons or discount coupons are used. For details, see [Unsubscribing from In-Use Resources](#).
- If you have enabled auto-renewal but no longer want 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 clusters and nodes, are no longer required, delete them in a timely manner. You need to pay attention to the following:

- You will not be billed for the management of a hibernated cluster, but other cloud service resources like EVS disks and bandwidth in the cluster will still be billed in their original billing modes.
- You will not be billed for basic resources like vCPUs and memory after a node is stopped, but the EVS disks and bandwidth used by the node will still be billed as usual.

To avoid incurring fees, delete the cluster and the related cloud service resources.

## Searching for Resources from Bills and Stopping Billing

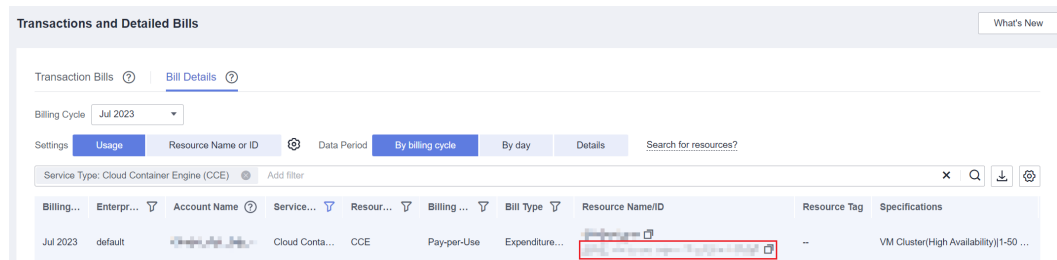
To ensure that all related resources are deleted, you can search the billing records by resource ID, and then delete the resources you identify in this way. The procedure is as follows:

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

The **Billing** page is displayed.

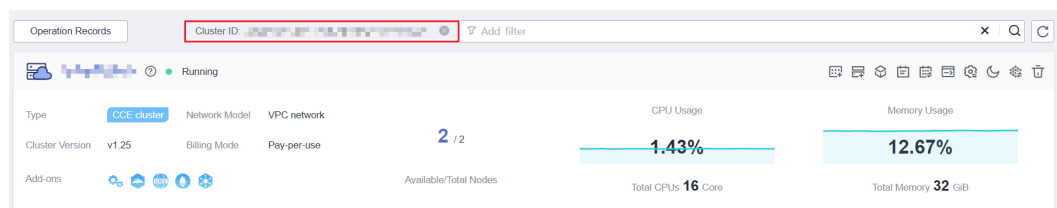
**Step 2** On the **Bills** page of Billing Center, select the **Bill Details** tab. Click the icon shown in the following figure to copy the resource ID.


**Figure 10-1** Copying the resource ID



**Step 3** Log in to the CCE console. On the top menu bar, select the region where your cluster resides. Select **Cluster ID** from the filter criteria, and enter the resource ID copied in step **Step 2**.

**Figure 10-2** Searching for the resource



**Step 4** Click  in the upper right corner of the cluster to delete the cluster.

**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 CCE cluster that is billed on an hourly basis at 08:30, the expenditures for that hour from 08:00 to 09:00 are usually not billed until about 10:00.

----End