

# Cloud Container Engine Autopilot

## Billing

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# 1 CCE Autopilot Billing Overview

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This section describes the billing modes, billed items, billing examples, billing mode change, package renewal, and bills of CCE Autopilot clusters.

- **Billing Modes**

CCE Autopilot supports two billing modes: pay-per-use and packages. [Billing Mode Overview](#) describes the two billing modes in detail.

- Pay-per-use: You can start using CCE Autopilot resources first and then pay as you go.
- Packages are a prepaid model where payment is made before usage, and each package is billed by both the resource quota and the purchase period in the order. Before making a purchase, you must ensure that your account balance is sufficient.

 **NOTE**

Currently, CCE Autopilot provides vCPU and memory packages required by pods. You can also change the billing mode later if it no longer meets your needs. For details, see [Changing the Billing Mode](#).

- **Billed Items**

The billed items of CCE Autopilot clusters include cluster management, pods, VPC endpoints, and other cloud service resources. [Billed Items](#) describes the billing factors and formulas of each billed item in detail.

- **Billing Examples**

[Billing Examples](#) provides billing examples and the billing for each billed item.

- **Changing the Billing Mode**

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

- **Package Renewal**

After a package expires, the CCE Autopilot cluster will be billed on a pay-per-use basis and can still run normally. If you want to continue using the package, you need to renew it within the specified period. You can renew the package manually or automatically. For details, see [Renewal Overview](#).

- **Bills**

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

- **Arrears**

If there is no 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**

In pay-per-use billing, you can delete a CCE Autopilot cluster that is no longer used to avoid additional expenditures. For details, see [Billing Termination](#).

# 2 Billing Modes

## 2.1 Billing Mode Overview

CCE Autopilot supports two billing modes: pay-per-use and packages.

- **Pay-per-use:** You can start using CCE Autopilot resources first and then pay as you go. Their usage durations are calculated by the second but billed every hour. This allows you to flexibly adjust the resources. 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. For details about pay-per-use billing, see [Pay-per-Use Billing](#).
- **Package:** You need to pay for packages before using them. Their usages are settled every hour. Packages are suitable for services with stable demand for a long time. You can buy more packages to enjoy more discounts. For details about packages, see [Package Overview](#).

 **NOTE**

On the **Overview** page of the cluster console, you can purchase CPU and/or memory packages required by pods by referring to [Buying a Package](#). **After you purchase a package in a region, it can be used by all pods in all CCE Autopilot clusters in that region.**

In addition to the vCPU and memory required by pods, no packages are provided for the cluster management, VPC endpoints, and ephemeral storage (the part in excess of 30 GiB) required by pods. Also, packages are unavailable for [other cloud service resources](#) on the CCE console. When a cloud service resource is created on the CCE console, it is billed on a pay-per-use basis by default. You can go to the corresponding cloud service console to purchase yearly/monthly cloud service resources or packages. These resources or packages will be billed based on their standard prices.

**Table 2-1** Cluster billing modes

Billing Mode	<a href="#">Pay-per-Use Billing</a>	Package
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<b>Payment</b>	Postpaid. You are billed based on the actual usage durations.	Prepaid. The packages are used first during the subscription period.
<b>Billed Usage Period</b>	Calculated by the second but billed every hour	Billed based on the purchase period in the order. For details, see <a href="#">Package Billing Cycle</a> .
<b>Billed Items</b>	All billed items	Only CPU and memory required by the pods
<b>Application Scenarios</b>	Recommended when the resource demands are likely to fluctuate and you want more flexibility	A cost-effective option for scenarios where the resource usage duration is predictable. It is recommended for resources expected to be used for a long term.

## 2.2 Pay-per-Use Billing

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

### Application Scenarios

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

### Billed Items

When creating a CCE Autopilot cluster, you can select pay-per-use billing from the CCE console for the billed items in [Table 2-2](#). By default, [other cloud service resources](#) automatically created on the CCE console are billed on a pay-per-use basis based on their standard pricing.

**Table 2-2** Items billed on a pay-per-use basis

Billed items	Description	Formula
*Cluster management	The expenditures for managing the cluster. <b>NOTE</b> If a cluster is frozen, workloads in the cluster will be in the pending state and will not be rescheduled until the cluster is unfrozen.	<b>Unit price of cluster management × Required duration</b> For details about the unit prices of cluster management, see <a href="#">Unit Prices in Pay-per-Use Billing</a> .

Billed items	Description	Formula
*Pods	<p>The expenditures for vCPUs, memory, and storage.</p> <p><b>NOTICE</b></p> <p>If a specification is not supported, it will be automatically upgraded to a higher one. For example, if all containers in a pod require 2 vCPUs and 3 GiB of memory, the specification is automatically upgraded to 2 vCPUs and 4 GiB of memory. <a href="#">Specification Description</a> lists the specifications supported by CCE Autopilot.</p> <p>By default, 30-GiB free ephemeral storage is allocated to each pod (with an IOPS upper limit of 2,500 and a burst limit of 16,000). Any storage space that exceeds 30 GiB will be billed separately.</p>	<p><b>Unit price of the pod specification × Required duration</b></p> <p>For details about the unit prices of pod specifications, see <a href="#">Unit Prices in Pay-per-Use Billing</a>.</p>
*VPC endpoints	<p>CCE Autopilot clusters connect to other cloud services such as SWR through VPC endpoints, which are billed separately based on the number of VPC endpoints you are using.</p>	<p><b>Unit price of the VPC endpoint × Required duration</b></p> <p>For details about the unit prices of VPC endpoint specifications, see <a href="#">VPC Endpoint Price Calculator</a>.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• If a VPC endpoint connects to a VPC endpoint service other than DNS or OBS, you will be billed for how long you use this VPC endpoint.</li> <li>• If a VPC endpoint connects to DNS or OBS, you will not be billed for this VPC endpoint.</li> </ul> <p>See the pricing on the VPC Endpoint console.</p>

## Billed Usage Period

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



**NOTE**

It takes a certain time to launch a CCE cluster or pod, so the billing starts from the time when the cluster or pod is successfully created.

To view the cluster creation time, access **Operation Records** on the CCE console.

To view the pod creation time, click the cluster name to go to the cluster overview page on the CCE console. In the navigation pane, choose **Workloads**. On the right of the page, click the corresponding workload tab and then the workload name. On the **Pods** tab, view the pod creation time in the **Created** column.

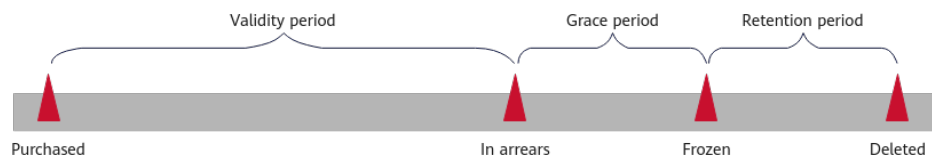
For example, if you purchased a pay-per-use cluster at 08:45:30 and deleted it at 08:55:30, you are billed for the 600 seconds from 08:45:30 to 08:55:30.

For example, if you purchased a pay-per-use pod at 8:48:30 and deleted it at 8:50:30, you are billed for the 120 seconds from 8:48:30 to 8:50:30.

## Impacts of Arrears

**Figure 2-1** 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, the resource enters a grace period and then a retention period.

**Figure 2-1** Lifecycle of a pay-per-use resource



### Arrears Reminder

You will be billed for the 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 your account is insufficient to pay your amount due, 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 **Overview** page in Billing Center and pay any past due balance as needed.

If you do not bring your account 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** state.

If you do not bring your account current before the retention period ends, CCE Autopilot clusters and resources like pods 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 [Topping Up an Account](#).

## Unit Prices in Pay-per-Use Billing

**NOTICE**

By default, 30 GiB of ephemeral storage is allocated to each pod for free (with an IOPS upper limit of 2,500 and a burst limit of 16,000). Any storage space that exceeds the 30 GiB quota will be billed separately.

**Table 2-3** Unit prices in pay-per-use billing

Region	Cluster Management	Pod
AP-Singapore	\$0.1 USD/hour	<ul style="list-style-type: none"> <li>• vCPU: \$0.045 USD/hour per vCPU</li> <li>• Memory: \$0.005 USD/hour per GiB</li> <li>• Storage: \$0.00028 USD/hour per GiB</li> </ul>
AP-Bangkok	\$0.1 USD/hour	<ul style="list-style-type: none"> <li>• vCPU: \$0.043 USD/hour per vCPU</li> <li>• Memory: \$0.005 USD/hour per GiB</li> <li>• Storage: \$0.00027 USD/hour per GiB</li> </ul>
AP-Jakarta	\$0.1 USD/hour	<ul style="list-style-type: none"> <li>• vCPU: \$0.045 USD/hour per vCPU</li> <li>• Memory: \$0.005 USD/hour per GiB</li> <li>• Storage: \$0.000294 USD/hour per GiB</li> </ul>
AF-Johannesburg	\$0.1 USD/hour	<ul style="list-style-type: none"> <li>• vCPU: \$0.049 USD/hour per vCPU</li> <li>• Memory: \$0.005 USD/hour per GiB</li> <li>• Storage: \$0.0003204 USD/hour per GiB</li> </ul>
CN-Hong Kong	\$0.1 USD/hour	<ul style="list-style-type: none"> <li>• vCPU: \$0.05 USD/hour per vCPU</li> <li>• Memory: \$0.006 USD/hour per GiB</li> <li>• Storage: \$0.000294 USD/hour per GiB</li> </ul>
CN Southwest-Guiyang1	\$0.1 USD/hour	<ul style="list-style-type: none"> <li>• vCPU: \$0.025 USD/hour per vCPU</li> <li>• Memory: \$0.003 USD/hour per GiB</li> <li>• Storage: \$0.00022 USD/hour per GiB</li> </ul>
CN South-Guangzhou	\$0.1 USD/hour	<ul style="list-style-type: none"> <li>• vCPU: \$0.028 USD/hour per vCPU</li> <li>• Memory: \$0.003 USD/hour per GiB</li> <li>• Storage: \$0.00022 USD/hour per GiB</li> </ul>

Region	Cluster Management	Pod
CN East-Shanghai1	\$0.1 USD/hour	<ul style="list-style-type: none"> <li>vCPU: \$0.028 USD/hour per vCPU</li> <li>Memory: \$0.003 USD/hour per GiB</li> <li>Storage: \$0.00022 USD/hour per GiB</li> </ul>
CN North-Beijing4	\$0.1 USD/hour	<ul style="list-style-type: none"> <li>vCPU: \$0.028 USD/hour per vCPU</li> <li>Memory: \$0.003 USD/hour per GiB</li> <li>Storage: \$0.00022 USD/hour per GiB</li> </ul>

## Specification Description

CCE Autopilot automatically upgrades the specifications that are not supported to higher ones to ensure that the pods always have the required resources.

**Table 2-4** Combinations of vCPUs and memory supported by CCE Autopilot

vCPU	Memory (GiB)
0.25 vCPUs	0.5, 1, and 2
0.5 vCPUs	1, 2, 3, and 4
1 vCPU	2 to 8 (increment: 1 GiB)
2 vCPUs	4 to 16 (increment: 1 GiB)
4 vCPUs	8 to 32 (increment: 1 GiB)
8 vCPUs	8 to 64 (increment: 4 GiB)
16 vCPUs	16 to 128 (increment: 8 GiB)
32 vCPUs	32, 64, 128, and 256
48 vCPUs	96, 192, and 384
64 vCPUs	128, 256, and 512

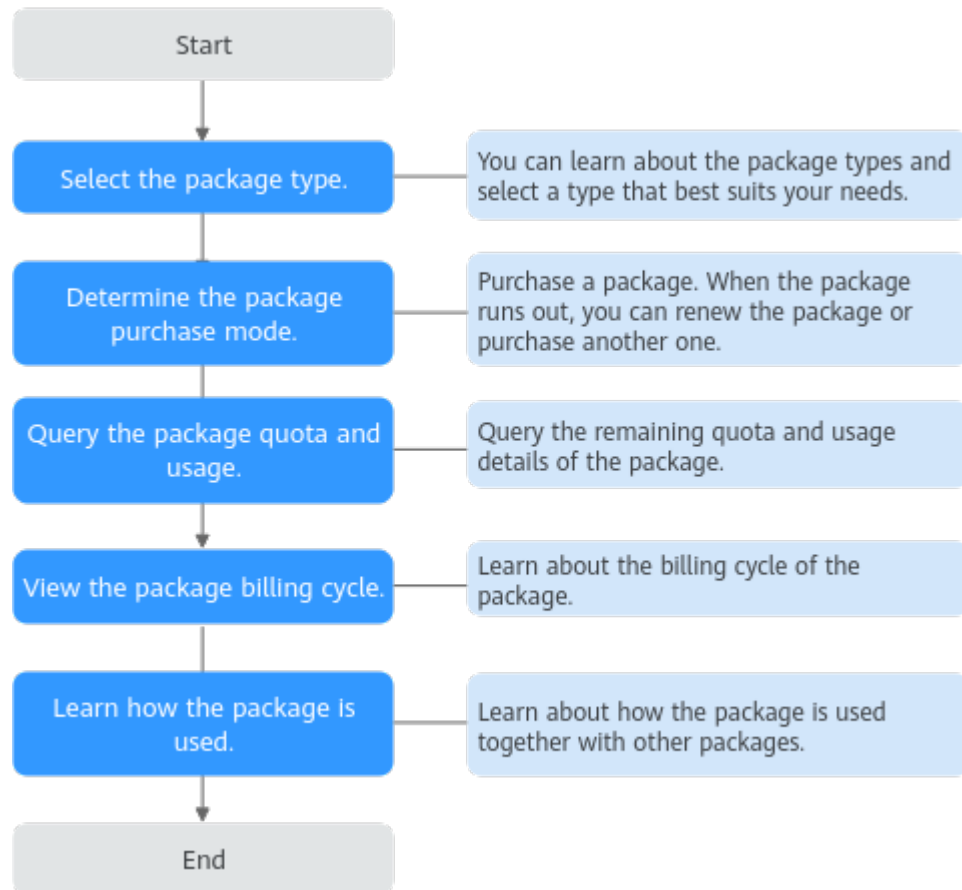
## 2.3 Packages

### 2.3.1 Package Overview

Packages provide resources at a discount. You need to buy packages before use them, and their usages are settled every hour. Packages are a good option when your services are stable and you want to reduce costs. CCE Autopilot provides vCPU and memory packages required by pods. After you purchase a package in a region, pods in all CCE Autopilot clusters in that region automatically use the

resources in the package during subsequent settlement. If the package resources are used up, the excess resources are automatically billed on a pay-per-use basis.

**Figure 2-2** How a package is purchased and used



## Package Type

The discount of a package depends on the resource quota and validity period of the package. The higher the quota, the longer the validity period, and the greater the discount. (For details about the packages, see [Table 2-5](#) and [Table 2-6](#).) You can purchase more than one package at the same time to meet your requirements. You can select a package type based on the resource usage and required duration.

- If you need to use a resource for a long time, you can purchase a yearly package at a quota of **1.x times the estimated annual usage**. If you need multiple packages, you can [configure usage alerts](#) and purchase new packages when the existing packages run out. The longer the validity period of a package, the greater the discount. In addition, the quota of a package should be slightly higher than the estimated usage to handle bursty traffic or temporary service volume fluctuation, so that resources will not be billed on a pay-per-use basis after the package runs out. By [configuring usage alerts](#) and buying new packages before the existing packages run out, you can prolong the package usage duration and avoid excessive purchase quota.

For example, if you estimate that 87,280 vCPU-hours are required in a year and want to purchase a yearly package at the quota of **95999.2 vCPU-hours**

(87272 × 1.1), you need to purchase eight Autopilot general-computing 12,000 vCPU-hours CPU yearly packages. You are advised to purchase packages in batches and set usage alerts. For example, you can purchase two 12,000 vCPU-hours CPU yearly packages first. After you receive the message or email about the usage alert, you can purchase another two 12,000 vCPU-hours CPU yearly packages. In this way, you can prolong the usage duration of the eight general-computing 12,000 vCPU-hours CPU yearly packages and avoid excessive vCPUs at a time.

- For short-term use, you are advised to purchase a monthly package and configure the usage alert. The package quota can be slightly less than the monthly usage to prevent the package from becoming invalid when the remaining quota is not used up within the package validity period. After receiving the **usage alert**, you can purchase a new package.

**Scenario 2** provides examples for your reference.

**Table 2-5** vCPU packages

Validity Period	Package Type	vCPU Unit Price Example (AP-Bangkok)
1 month	Autopilot general-computing 1,000 vCPU-hours CPU monthly package	\$0.03888 USD/hour per vCPU
	Autopilot general-computing 10,000 vCPU-hours CPU monthly package	\$0.034992 USD/hour per vCPU
	Autopilot general-computing 100,000 vCPU-hours CPU monthly package	\$0.031104 USD/hour per vCPU
1 year	Autopilot general-computing 12,000 vCPU-hours CPU yearly package	\$0.0324 USD/hour per vCPU
	Autopilot general-computing 120,000 vCPU-hours CPU yearly package	\$0.02916 USD/hour per vCPU
	Autopilot general-computing 1,200,000 vCPU-hours CPU yearly package	\$0.02592 USD/hour per vCPU

**Table 2-6** Memory packages

Validity Period	Package Type	vCPU Unit Price Example (AP-Bangkok)
1 month	Autopilot general-computing 1,000 GiB-hours memory monthly package	\$0.00424 USD/hour per GiB

Validity Period	Package Type	vCPU Unit Price Example (AP-Bangkok)
	Autopilot general-computing 10,000 GiB-hours memory monthly package	\$0.003819 USD/hour per GiB
	Autopilot general-computing 100,000 GiB-hours memory monthly package	\$0.0033955 USD/hour per GiB
1 year	Autopilot general-computing 12,000 GiB-hours memory yearly package	\$0.00353667 USD/hour per GiB
	Autopilot general-computing 120,000 GiB-hours memory yearly package	\$0.00318325 USD/hour per GiB
	Autopilot general-computing 1,200,000 GiB-hours memory monthly package	\$0.0028296 USD/hour per GiB

 **NOTE**

When you purchase a package, note the following:

- vCPU-hours indicate the number of vCPUs used during a period of time. For example, 1,000 vCPU-hours indicate that one core is used for 1,000 hours (about 41.67 days) or two cores are used for 500 hours (about 20.83 days).
- GiB-hours indicate the memory used during a period of time. For example, 1,000 GiB-hours indicate that 1-GiB memory is used for 1,000 hours (about 41.67 days) or 2-GiB memory for 500 hours (about 20.83 days).

For example, if a pod requires 4 vCPUs and 8-GiB memory, a 1,000 vCPU-hours CPU package can be used for 10.42 days, and a 1,000 GiB-hours memory package can be used for 5.21 days.

## Package Purchase

For details about how to purchase a package, see [Purchasing a Package](#). If a package is insufficient or expires, you can purchase another package or renew the package. The differences between new purchase and renewal are as follows:

- **New purchase:** The package will be used immediately after you purchase it. You can buy a new package where the purchase period of the current package has not ended but the resource in the package is about to be used up. You can purchase a package on the **Overview** page or by clicking **Buy Again** in **Billing Center**. For details, see [Buying a Package](#) and [Buying a Package Again](#).
- **Renewal:** When a package is about to expire and you want to continue using this package, you can renew the package. After the package is renewed, the renewal period will not start before the current period expires. For details, see [Renewing a Package](#).

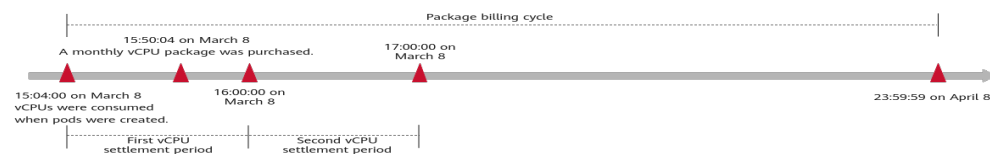
## Package Usage Query

Go to [Billing Center > Resource Packages](#), view the remaining and used resources in a package. For details, see [Resource Packages](#).

## Package Billing Cycle

The billing cycle of a package is determined by the purchase duration (GMT +08:00). When you purchase a package, it takes effect immediately in the current settlement period. The start time of the billing cycle is the start time of the settlement period (accurate to second), and the end time is 23:59:59 on the expiration date of the package.

**Figure 2-3** Example billing cycle



You created a pod at 15:04:00 on March 8, 2024 and purchased a 1,000 vCPU-hours CPU monthly package at 15:50:04 on March 8, 2024. Because the settlement is performed every hour, the CPU settlement period of the pod was from 15:04:00 on March 8, 2024 to 16:00:00 on March 8, 2024, and the billing cycle of the package was from 15:04:00 on March 8, 2024 to 23:59:59 on April 8, 2024. After 23:59:59 on April 8, 2024, vCPU usage were billed on a pay-per-use basis.

## Package Use Sequence

If there are multiple packages with the same attributes, they will be used in the order of their effective and expiration times.

You purchased two CPU packages in the AP-Bangkok region.

- Package A: An Autopilot general-computing 1,000 vCPU-hours CPU monthly package that was effective from 15:00:00 on March 8, 2024 to 23:59:59 on April 8, 2024
- Package B: An Autopilot general-computing 10,000 vCPU-hours CPU monthly package that was effective from 15:00:00 on March 15, 2024 to 23:59:59 on April 15, 2024

**Table 2-7** How packages were used

Duration	Package Use Sequence
From 15:00:00 on March 8, 2024 to 15:00:00 on March 15	Only package A was effective. Only package A was used. Any vCPUs in excess of 1,000 were billed on a pay-per-use basis.

Duration	Package Use Sequence
From 15:00:00 on March 15, 2024 to 23:59:59 on April 8, 2024	Both packages A and B were effective. Package A was used preferentially. When the number of vCPUs exceeded 1,000, package B was used. Any vCPUs in excess of 11,000 were billed on a pay-per-use basis.
From 00:00:00 on April 9 2024 to 23:59:59 on April 15, 2024	Package A expired, and only package B was effective. Only package B was used. Any vCPUs in excess of 10,000 were billed on a pay-per-use basis.
From 23:59:59 on April 15, 2024	Both packages A and B expired. Any subsequent usages were billed on a pay-per-use basis.

## 2.3.2 Buying a Package

CCE Autopilot clusters provide packages of CPU and memory required by pods. You can purchase packages to enjoy more discounts. You cannot unsubscribe from packages. Plan the resources and validity period carefully before your purchase.

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

### NOTE

When purchasing packages, note the following:

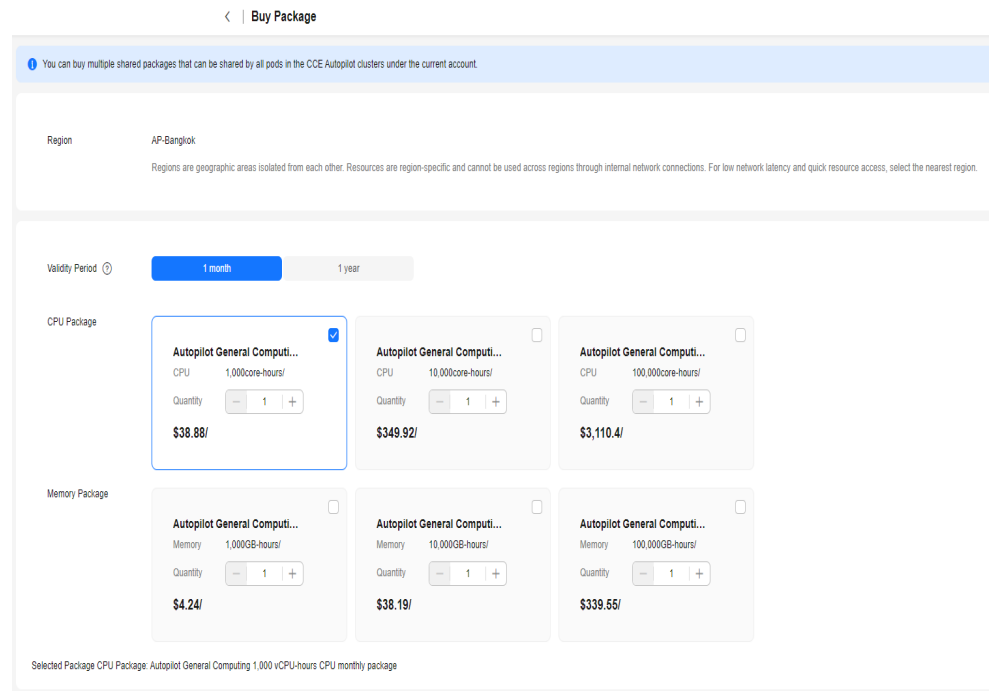
- Packages are billed once and effective immediately upon payment. Currently, you cannot set a future effective date or unsubscribe from the packages.
- After the packages expire, you can still use CCE Autopilot clusters. Ensure that your account balance is sufficient. The system will automatically settle the expenditures on a pay-per-use basis.
- The validity period can be one month or one year. After the validity period expires, the remaining resources cannot be used.

## Procedure

- Step 1** Log in to the [CCE console](#) and click the cluster name to go to the **Overview** page. In the **Autopilot Resource Package** area on the right, click **Buy Package**.
- Step 2** On the page that is displayed, select the required package specifications as prompted.



**Figure 2-4** Buying a package



**Step 3** Confirm the specifications, click **Pay Now** in the lower right corner. In the displayed dialog box, click **OK**.

**Step 4** On the **Buy Cloud Container Engine (CCE)** page, pay for the order as prompted.

----End

### 2.3.3 Buying a Package Again

If the resources in a package are about to be used up, you can purchase another package to add more resources.

#### Purchase Description

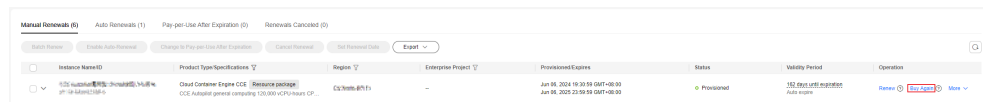
After purchasing a package, you can purchase the package again. After you purchase the package again, the existing package is used preferentially. The pay-per-use resources before you buy a package cannot be deducted using the package. If your package is about to run out, it is recommended that you purchase another package.

#### Procedure

**Step 1** On the **CCE console**, move your cursor to **Billing** in the upper right corner and choose **Renewal** from the drop-down list.

**Step 2** In the row containing the existing package, click **Buy Again** in the **Operation** column.

Figure 2-5 Buying a package again



**Step 3** On the **Buy Cloud Container Instance CCI** page, choose **Immediately after payment** or **Custom**.

**NOTE**

The specifications of the new package are the same as those of the existing package. If you select **Custom** and the payment time is later than the specified effective time, the package takes effect immediately after the payment.

**Step 4** Click **Submit** and complete the payment.

----End

### 2.3.4 Configuring Package Usage Alerts

When the remaining quota of a package reaches the alert threshold, an SMS message or email will be sent to you so that you can purchase a new package in a timely manner to avoid extra expenses. If multiple packages are used together, the remaining quota of each package will be calculated.

#### Procedure

- Step 1** On the **CCE console**, click **Billing** in the upper right corner.
- Step 2** In the navigation pane, choose **Resource Packages**. In the upper right corner of the page, click **Usage Alert**.
- Step 3** On the **Usage Alert** page, configure the parameters as prompted. For details, see **Configuring Usage Alert**.

For CCE Autopilot clusters, the **Package Item** is **Autopilot General Computing CPU** for vCPU packages and **Autopilot General Computing Memory** for memory packages. You can set the remaining usage threshold of a package as required. When the remaining quota of a package reaches the alert threshold, an SMS message or email will be sent to you so that you can purchase a new package in a timely manner to avoid extra expenses.

Figure 2-6 Usage alerts

✕

**Usage Alert**

1. When the remaining usage of a resource package reaches the preset threshold, you will receive notification by SMS and email. (If you have more than one resource package of the same type used together, the total remaining usage is calculated.)

2. You can go to [SMS and Email Settings](#) to view the recipients and notification methods.

3. After you buy new resource packages or renew existing ones, the total package usage will be re-calculated and remaining usage alerts are adjusted accordingly.

4. The usage of each resource package applicable to only one certain region will be calculated separately.

5. Alerts are not supported for those resource packages that are reset on a per hour, day, or week basis.

Threshold Type ?

Percentage
  Absolute value
  Custom  
Once changed, configurations based on the previously set type become invalid.

Batch Alerting

Remaining Usage Threshold

Package Item	Enable/Disable	Threshold Type	Remaining Usage Threshold
	<input type="checkbox"/>	Percentage	10%
	<input type="checkbox"/>	Percentage	10%
	<input type="checkbox"/>	Percentage	10%
	<input type="checkbox"/>	Percentage	10%
Autopilot General Computing CPU	<input checked="" type="checkbox"/>	Percentage	10%
Autopilot General Computing Memory	<input checked="" type="checkbox"/>	Percentage	10%
	<input type="checkbox"/>	Percentage	10%
	<input type="checkbox"/>	Percentage	10%

Total Records: 8  < 1 >

**Step 4** Go to [Message Center](#), you can configure message recipients on the **Message Receiving Management > SMS & Email Settings** page. For details, see [Managing a Message Recipient](#).

The message type for package usage alerts is **Account balance**.

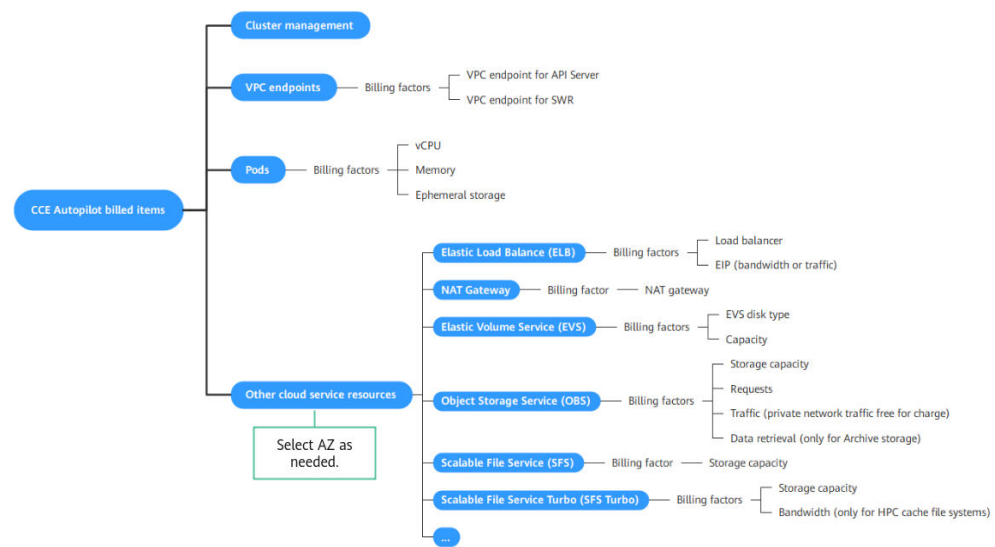
-----End

# 3 Billed Items

When using CCE Autopilot, you will be billed for cluster management, pods, VPC endpoints, and other cloud service resources.

## CCE Autopilot Billed Items

Figure 3-1 Billed items



**NOTE**

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

**Table 3-1** Price of a CCE Autopilot cluster

Billed items	Description	Billing Mode	Formula
*Cluster management	<p>The expenditures for managing the cluster</p> <p><b>NOTE</b> If a cluster is frozen, workloads in the cluster will be in the pending state and will not be rescheduled until the cluster is unfrozen.</p>	Pay-per-use	<p><b>Unit price of cluster management × Required duration</b></p> <p>For details about the unit prices of cluster management, see <a href="#">Unit Prices in Pay-per-Use Billing</a>.</p>
*Pods	<p>Billed based on the vCPU, memory, and temporary storage specifications.</p> <p><b>NOTICE</b> If a specification is not supported, it will be automatically upgraded to a higher one. For example, if all containers in a pod require 2 vCPUs and 3 GiB of memory, the specification is automatically upgraded to 2 vCPUs and 4 GiB of memory. <a href="#">Specification Description</a> lists the specifications supported by CCE Autopilot.</p> <p>By default, 30-GiB free ephemeral storage is allocated to each pod (with an IOPS upper limit of 2,500 and a burst limit of 16,000). Any storage space that exceeds 30 GiB will be billed separately.</p>	Pay-per-use and packages (CPU and/or memory)	<p><b>Unit price of the pod specification × Required duration</b></p> <p>For details about the unit prices of pod specifications, see <a href="#">Unit Prices in Pay-per-Use Billing</a>.</p>

Billed items	Description	Billing Mode	Formula
*VPC endpoints	CCE Autopilot clusters connect to other cloud services such as SWR through VPC endpoints, which are billed separately based on the number of VPC endpoints you are using.	Pay-per-use	<p><b>Unit price of the VPC endpoint × Required duration</b></p> <p>For details about the unit prices of VPC endpoint specifications, see <a href="#">VPC Endpoint Price Calculator</a>.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• If a VPC endpoint connects to a VPC endpoint service other than DNS or OBS, you will be billed for how long you use this VPC endpoint.</li> <li>• If a VPC endpoint connects to DNS or OBS, you will not be billed for this VPC endpoint.</li> </ul> <p>See the pricing on the VPC Endpoint console.</p>
Other cloud resources	Resources of cloud services used by a cluster such as ELB are billed based on their pricing rules, no matter whether these resources are automatically created or manually added during cluster creation and use.  Although cloud resources can be created on the CCE console, their billed items and bills are independent of those of CCE clusters.	Respective billing modes	For details, see <a href="#">Price Calculator</a> .

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

**Table 3-2** Billed items of other cloud service resources

Billed Item	Description	Billing Mode	Formula
ELB	<p>Used when a Service or ingress is created in a cluster. A load balancer is automatically created and billed on a pay-per-use basis.</p> <p><b>Billing factor:</b></p> <ul style="list-style-type: none"> <li>Dedicated load balancer: the number of AZs, load balancer, and EIP (billed by bandwidth or traffic)</li> </ul> <p>For details, see <a href="#">Billing</a>.</p>	Yearly/ Monthly or pay- per-use	<ul style="list-style-type: none"> <li><b>Dedicated load balancer: Number of AZs × Unit price × Required duration + EIP price</b></li> </ul> <p>For details, see <a href="#">ELB Pricing Details</a>.</p>
NAT Gateway	<p>Used when SNAT is configured for the cluster. A NAT gateway is automatically created and billed on a pay-per-use basis.</p> <p><b>Billing factor:</b> NAT gateway specifications</p> <p>For details, see <a href="#">Billing</a>.</p>	Yearly/ Monthly or pay- per-use	<p><b>Unit price × Required duration</b></p> <p>For details, see <a href="#">NAT Gateway Pricing Details</a>.</p>
EVS	<p>Used for persistent storage for the workloads in the cluster. An EVS disk is automatically and billed on a pay-per-use basis.</p> <p><b>Billing factors:</b> EVS disk type and disk space</p> <p>Regardless of whether you use the disk after purchasing it, you will be billed right away. For details, see <a href="#">Billing</a>.</p>	Yearly/ Monthly or pay- per-use	<p><b>Unit price × Purchase duration</b></p> <p>For details, see <a href="#">EVS Pricing Details</a>.</p>

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



# 4 Billing Examples

## Scenario 1

You purchased a pay-per-use CCE Autopilot cluster in AP-Bangkok for testing services on the cloud. The detailed operations are as follows:

1. At 15:30:00 on March 18, 2023, you purchased a CCE Autopilot cluster. The specifications are as follows:

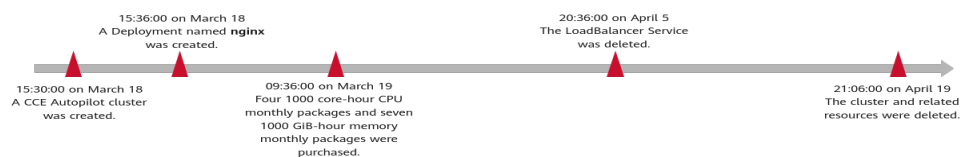
### NOTE

For ease of description, assume that all the resources involved were created at the same time. There may be a time difference of several seconds. You can view the actual time on the console.

- Billing mode: pay-per-use
  - SNAT: enabled
  - Add-ons: CoreDNS and Kubernetes Metrics Server. Two Deployments were automatically created for the add-ons:
    - Deployment for CoreDNS
      - Pods: 2
      - vCPUs: 1
      - Memory: 2 GiB
      - Ephemeral storage of a single pod: 30 GiB (free)
    - Deployment for Kubernetes Metrics Server
      - Pods: 2
      - vCPU: 1
      - Memory: 2 GiB
      - Ephemeral storage of a single pod: 30 GiB (free)
2. At 15:36:00 on March 18, 2023, you created a Deployment named **nginx**. The specifications are as follows:
    - Pods: 2 (one container in each pod)
    - Container image: nginx:latest
      - Container vCPU: 0.5 vCPUs

- Container memory: 1 GiB
  - Create a LoadBalancer Service. The load balancer details are as follows:
    - Type: dedicated load balancer
    - AZ: single AZ
    - Specifications: network load balancing (TCP/UDP), small I (10 LCUs)
    - EIP type: dynamic BGP
    - EIP bandwidth: 5 Mbit/s, billed by traffic
  - Ephemeral storage of a single pod: 30 GiB (free)
3. At 09:36:00 on March 19, 2023, you decided to use the cluster for a long time and subscribed to four 1,000 vCPU-hours CPU monthly packages and seven 1000 GiB-hours memory monthly packages (expiration time of all packages: April 19, 2023, 23:59:59).
  4. At 20:36:00 on April 5, 2023, you deleted the LoadBalancer Service for the Deployment.
  5. At 21:06:00 on April 19, 2023, you deleted the cluster and related resources.

**Figure 4-1** Operation timeline



**Table 4-1**, **Table 4-2**, and **Table 4-3** list the incurred expenditures by resource type.

- In **Table 4-1**, the total expenditures of the cluster are  $78.85 + 22.078 + 82.8365 = \$183.7645$  USD.
- In **Table 4-2**, the total expenditures of the pods are  $0.0172 + 0.004 + 3.741 + 0.87 + 155.52 + 29.68 + 2.805 = 192.6372$  USD.
- In **Table 4-3**, the total expenditures of the load balancer are  $30.4015 + 1.08 = \$31.4815$  USD.

The total expenditures are \$407.8832 USD.

**NOTE**

\*In pay-per-use billing, the resource usages are billed by the second and the amount due is truncated to the 2nd decimal place. This amount may vary depending on the actual bill.

**Table 4-1** Cluster expenditures

Usage Period	Billing Mode	Billed Duration and Traffic	Billing Factors and Unit Prices	Expenditures*
From 15:30:00 on March 18, 2023 to 08:00:00 on April 20, 2023	Pay-per-use	788.5 hours (33 days, including March 18 and April 20) 5-GB public network traffic	<ul style="list-style-type: none"> <li>• Cluster management: \$0.1 USD/hour (AP-Bangkok)</li> <li>• VPC endpoints:                             <ul style="list-style-type: none"> <li>- VPC endpoint for API Server: \$0.014 USD/hour</li> <li>- VPC endpoint for SWR: \$0.014 USD/hour</li> </ul> </li> <li>• SNAT                             <ul style="list-style-type: none"> <li>- NAT gateway: \$2.438 USD/day</li> <li>- EIP: \$0.005 USD/hour</li> <li>- Bandwidth: 0.108 USD/GB</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Cluster management: <math>788.5 \times 0.1 = \\$78.85</math> USD</li> <li>• VPC endpoints: <math>788.5 \times 0.028 = \\$22.078</math> USD</li> <li>• SNAT: <math>33 \times 2.438 + 788.5 \times 0.005 + 5 \times 0.108 = \\$82.8365</math> USD</li> </ul>

**Table 4-2** Pod expenditures

Usage Period	Billing Mode	Required Duration	Billing Factors and Unit Prices	Expenditures*
From 15:30:00 on March 18, 2023 to 15:36:00 on March 18, 2023	Pay-per-use	0.1 hours	<ul style="list-style-type: none"> <li>• Pods for the add-ons:                             <ul style="list-style-type: none"> <li>- vCPU: USD 0.043/hour per vCPU</li> <li>- Memory: \$0.005 USD/hour per GiB</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• vCPU: <math>0.1 \times 4 \times 0.043 = \\$0.0172</math> USD</li> <li>• Memory: <math>0.1 \times 8 \times 0.005 = \\$0.004</math> USD</li> </ul>

Usage Period	Billing Mode	Required Duration	Billing Factors and Unit Prices	Expenditures*
From 15:36:00 on March 18, 2023 to 09:00:00 on March 19, 2023	Pay-per-use	17.4 hours	<ul style="list-style-type: none"> <li>Pods for the add-ons and Deployment:                             <ul style="list-style-type: none"> <li>- vCPU: USD 0.043/hour per vCPU</li> <li>- Memory: \$0.005 USD/hour per GiB</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>vCPU: <math>17.4 \times (4 \times 0.043 + 1 \times 0.043) = \\$3.741</math> USD</li> <li>Memory: <math>17.4 \times (8 \times 0.005 + 2 \times 0.005) = \\$0.87</math> USD</li> </ul>
From 09:00:00 on March 19, 2023 to 13:00:00 on April 17, 2023	vCPU package (4 packages) Memory package (7 packages)	700 hours	<ul style="list-style-type: none"> <li>Autopilot general-computing 1,000 vCPU-hours CPU monthly package: \$38.88 USD/month</li> <li>Autopilot general-computing 1,000 GiB-hours memory monthly package: \$4.24 USD/month</li> </ul>	<ul style="list-style-type: none"> <li>vCPU package: <math>4 \times 38.88 = \\$155.52</math> USD</li> <li>Memory package: <math>7 \times 4.24 = \\$29.68</math> USD</li> </ul>

Usage Period	Billing Mode	Required Duration	Billing Factors and Unit Prices	Expenditures*
From 13:00:00 on April 17, 2023 to 21:06:00 on April 19, 2023	vCPU packages (packages still used but their expenditures already included in the previous period) Pay-per-use memory (7,000-GiB memory used up)	56.1 hours	<ul style="list-style-type: none"> <li>Pods for the add-ons and Deployment:                             <ul style="list-style-type: none"> <li>Memory: \$0.005 USD/hour per GiB (The memory in the packages has been used up.)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Memory: <math>56.1 \times (8 \times 0.005 + 2 \times 0.005) = \\$2.805</math> USD</li> </ul>

**Table 4-3** Load balancer expenditures

Usage Period	Billing Mode	Billed Duration and Traffic	Billing Factors and Unit Prices	Expenditures*
From 15:36:00 on March 18, 2023 to 20:36:00 on April 5, 2023	Pay-per-use	437 hours, 10-GB public network traffic	<ul style="list-style-type: none"> <li>Load balancer: \$0.0695 USD/hour</li> <li>Public network traffic: \$0.108 USD/GB</li> </ul>	<ul style="list-style-type: none"> <li>Load balancer: <math>437 \times 0.0695 = \\$30.4015</math> USD</li> <li>Public network traffic: <math>10 \times 0.108 = \\$1.08</math> USD</li> </ul>

## Scenario 2

You deployed a large number of applications in a CCE Autopilot cluster in AP-Bangkok. It was estimated that 12,000 vCPUs and 48,000 GiB of memory were required for one year, so you purchased one Autopilot general-computing 12,000 vCPU-hours CPU yearly package and four Autopilot general-computing 12,000 GiB-hours memory yearly packages in advance. In the middle of the year, it was estimated that 36,000 vCPUs and 57,800 GiB of memory were required for new services. You wanted to know which billing mode was the most cost-effective for the new services.

 **NOTE**

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

- If the CCE Autopilot cluster is not required after the current year, the combination of pay-per-use billing and packages can help save costs. The following table compares the two billing modes in detail.

**Table 4-4** Billing mode comparison

Billing Mode	Billing Rules	Expenditures*
Pay-per-use	<ul style="list-style-type: none"> <li>• vCPU: Unit price × Number of vCPUs × Usage duration</li> <li>• Memory: Unit price × Memory size × Usage duration</li> </ul>	<ul style="list-style-type: none"> <li>• vCPU: <math>30,000 \times 0.043 = \\$1,290</math> USD</li> <li>• Memory: <math>57,800 \times 0.005 = \\$289</math> USD</li> </ul> <p>Total: \$1,579 USD</p>
Packages	<ul style="list-style-type: none"> <li>• 3 × Autopilot general-computing 12,000 vCPU-hours CPU yearly package</li> <li>• 5 × Autopilot general-computing 12,000 GiB-hours memory yearly package</li> </ul>	<ul style="list-style-type: none"> <li>• vCPU: <math>3 \times 388.8 = \\$1,166.4</math> USD</li> <li>• Memory: <math>5 \times 42.44 = \\$212.2</math> USD</li> </ul> <p>Total: \$1,378.6 USD</p>
Pay-per-use and packages	<ul style="list-style-type: none"> <li>• vCPU: 3 × Autopilot general-computing 12,000 vCPU-hours CPU yearly package</li> <li>• Memory: 4 × Autopilot general-computing 12,000 GiB-hours memory yearly package + 7 × Autopilot general-computing 1,000 GiB-hours memory monthly package + 800 GiB-hour pay-per-use memory</li> </ul>	<ul style="list-style-type: none"> <li>• vCPU: <math>3 \times 388.8 = \\$1,166.4</math> USD</li> <li>• Memory: <math>4 \times 42.44 + 7 \times 4.24 + 800 \times 0.005 = \\$203.44</math> USD</li> </ul> <p>Total: \$1369.84 USD</p>

- Assume that you want to use the CCE Autopilot cluster in the next year and about 80,000 to 100,000 vCPU-hours and 110,000 to 150,000 GiB-hours are required from the middle of the current year to the next year.
  - For vCPUs, you can purchase Autopilot general-computing 12,000 vCPU yearly packages in batches to prolong the validity period of packages and avoid waste. You can also flexibly adjust the package specifications based on the vCPU usage. For example, if the vCPU usage increases sharply in the next year, you can purchase a 120,000 vCPU-hours CPU yearly package.
  - For memory, you are advised to purchase an Autopilot general-computing 120,000 GiB-hours memory yearly package and configure a usage alert by referring to [Configuring Package Usage Alerts](#) so that you adjust the quota based on the subsequent usage when the package is about to run out.

# 5 Changing the Billing Mode

---

- The billing mode of vCPUs and memory required by pods can be changed from pay-per-use to packages.

When the CCE Autopilot cluster is being used, the vCPUs and memory required by pods are billed on a pay-per-use basis by default. If the vCPUs and memory required for creating pods do not meet your requirements, you can purchase packages as needed to enjoy more discounts. For details, see [Buying a Package](#).

- The billing mode of vCPUs and memory required by pods can be changed from packages to pay-per-use.

When a package expires or runs out, the billing mode automatically changes to pay-per-use.



# 6 Package Renewal

---

## 6.1 Renewal Overview

### When to Renew Subscriptions

If you want to continue using a package after it expires, you need to renew the package within the specified period. If it is not renewed, the pay-per-use billing is automatically used. After a package is renewed, it takes effect after the current validity period expires. If the package cannot meet your requirements, you can [purchase the package again](#).

Only packages can be renewed. If you use resources on a pay-per-use basis, just ensure that your account has a valid payment method configured or you have a top-up account with sufficient balance.

### How to Renew Subscriptions

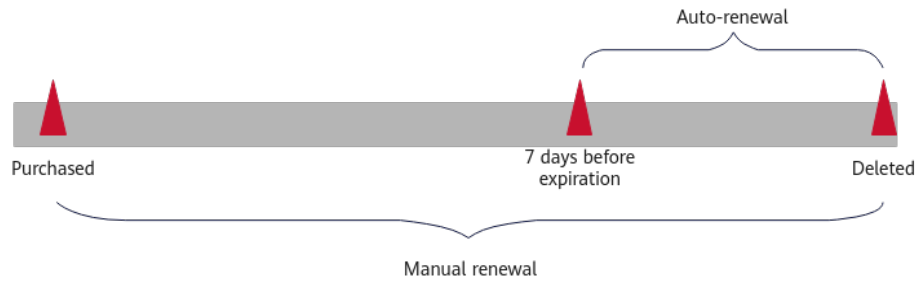
[Table 6-1](#) describes the two methods of renewing a package.

**Table 6-1** Package renewal methods

Method	Description
<a href="#">Manually Renewing a Package</a>	Before a package is automatically deleted, you can manually renew it on the <a href="#">Renewals</a> page.
<a href="#">Automatically Renewing a Package</a>	If auto-renewal is enabled, the system automatically renews the subscription before the subscription expires. This prevents the cost from increasing if you forget to manually renew the subscription.

You can select a method to renew a package based on the phase it is currently in.

Figure 6-1 Package lifecycle



Auto-renewal can be enabled anytime before a package expires. The system attempts to automatically renew the package at 03:00 seven days (default, and can be user-defined) before it expires. If the deduction fails, there is one attempt at 03:00 every day until the package expires or the renewal is successful.

## 6.2 Manually Renewing a Package

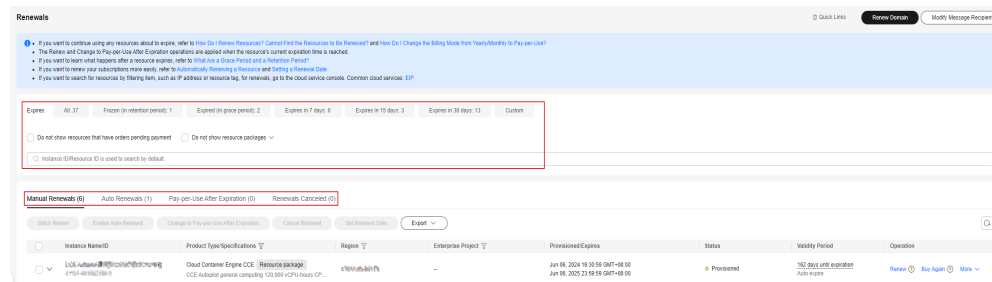
Before a package expires, you can renew it at any time to extend the resource usage.

**Step 1** Go to Billing Center. In the navigation pane, choose **Orders > Renewals**.

**Step 2** Create custom search criteria.

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

Figure 6-2 Renewals

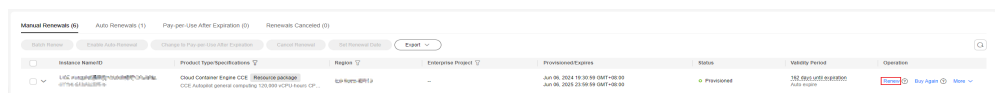


You can move all resources that need to be manually renewed to the **Manual Renewals** tab. For details, see **Restoring to Manual Renewal**.

**Step 3** Manually renew resources.

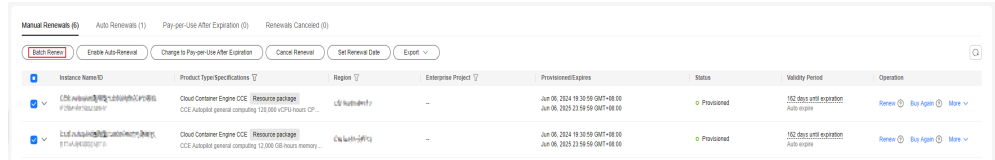
- Individual renewal: Click **Renew** in the **Operation** column for the desired resource.

Figure 6-3 Individual renewal



- Batch renewal: Select the desired resources and click **Batch Renew** in the upper left corner. A maximum of 100 resources can be renewed at a time. Only packages with the same effective period can be renewed at the same time.

Figure 6-4 Batch renewal



- Step 4** On the **Renewals** page, determine whether to enable **Auto-renew** and **Renewal Date**, and click to change the expiration date. **Renewal Date**: You can set a renewal date to a day in each month. For details, see [Setting the Same Renewal Day for Packages](#). Confirm the configuration and submit your request.
- Step 5** Select a payment method and make your payment. Once the order is paid, the renewal is complete.

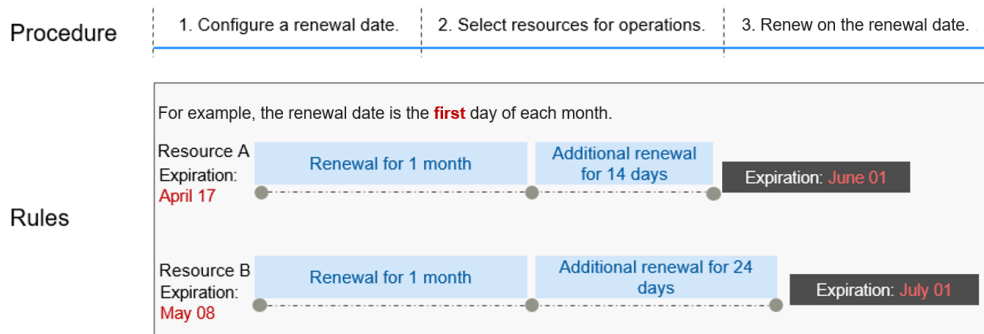
----End

### Setting the Same Renewal Day for Packages

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

In [Figure 6-5](#), a user sets the same renewal day for two resources that will expire at different dates.

Figure 6-5 Setting the same renewal day for resources with different expiry dates



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

## 6.3 Automatically Renewing a Package

Auto-renewal can avoid extra costs incurred because you forget to manually renew the packages. The auto-renewal rules are as follows:

- The first auto-renewal date is based on the expiration date and the billing cycle.
- The auto-renewal period of a renewed package is subject to the effective period of the original package.
- You can enable auto-renewal at any time before a package expires. The system will make the first attempt to charge your account for the renewal at 03:00 seven days before the expiration 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 package manually if you want to. After a manual renewal is complete, auto-renewal is still valid, and the renewal cost will be deducted from your account seven days before the new expiry date.
- By default, the renewal cost 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 package to be renewed has not expired.

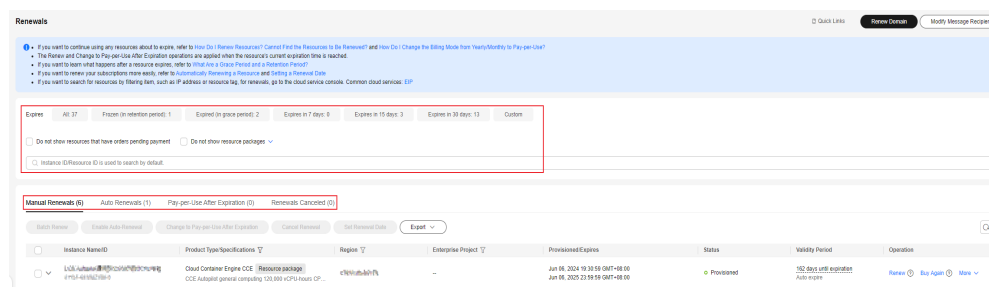
## Enabling Auto-Renewal on the Renewals Page

**Step 1** Go to Billing Center. In the navigation pane, choose [Orders > Renewals](#).

**Step 2** Create custom 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 6-6** Renewals



**Step 3** Enable auto-renewal.

- 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.



# 7 Bills

---

You can view the resource usages and bills for different billing cycles under [Dashboard](#) in Billing Center.

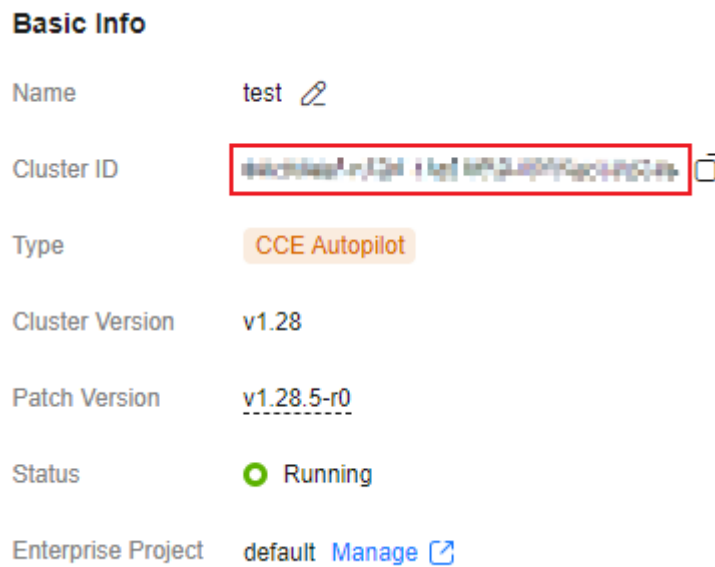
## Bill Generation


- After a package is paid, a bill will be generated in the billing system in real time for settlement. To view the remaining quota and usage details of a package, go to the [Resource Packages](#) page in Billing Center. For details, see [Resource Packages](#).
- Pay-per-use resources are billed by the hour, day, or month, depending on the resource type. Pay-per-use CCE Autopilot clusters are settled by the hour. You are not billed immediately after a record is generated. For example, if a pay-per-use CCE Autopilot cluster (billed hourly) 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 [Expenditure Details](#) page (go to Billing Center and choose **Billing > Expenditure Details**), **Expenditure Time** lists the usage duration of your pay-per-use resources.

## Viewing Bills of a Specific Resource

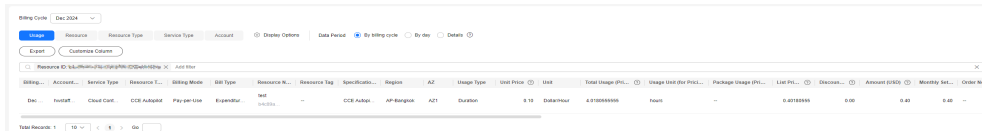
- Step 1** Log in to the [CCE console](#) and click the cluster name to access the cluster console.
- Step 2** On the cluster overview page, copy the cluster ID.

**Figure 7-1** Obtaining the cluster ID



**Step 3** Go to Billing Center, choose **Billing > Expenditure Details**, select **Resource ID** as the filter, enter the resource ID copied in the previous step, and click the  icon to search for the bills of the resource.

**Figure 7-2** 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 CCE Autopilot cluster in AP-Bangkok at 10:09:06 on April 08, 2024 and then deleted it at 12:09:06 on April 08, 2024. [Table 7-1](#) describes the cluster details, including the cluster management, and vCPU and memory required by pods. (VPC endpoints are automatically created during cluster creation.)

### NOTE

For ease of description, assume that all the resources involved were created at the same time. There may be a time difference of several seconds. You can view the actual time on the console.

Unit prices in this example are used for reference only, and the calculated prices are only estimates. As unit prices change from time to time, the prices shown here will differ from actual prices. For details, see the data released on the Huawei Cloud official website.

**Table 7-1** Cluster details

<b>Billing Mode</b>	Pay-per-use
<b>SNAT</b>	Disabled
<b>Add-ons</b>	<ul style="list-style-type: none"> <li>• CoreDNS and Kubernetes Metrics Server. Two Deployments were automatically created for the add-ons:             <ul style="list-style-type: none"> <li>- Deployment for CoreDNS Pods: 2 (one container in each pod) vCPU: 1 Memory: 2 GiB Ephemeral storage of a single pod: 30 GiB (free)</li> <li>- Deployment for Kubernetes Metrics Server Pods: 2 (one container in each pod) vCPU: 1 Memory: 2 GiB Ephemeral storage of a single pod: 30 GiB (free)</li> </ul> </li> </ul>

## CCE Autopilot Cluster Transaction Records

You can view the transaction records of a CCE Autopilot cluster on the [Bills > Expenditure Details](#) page in Billing Center. The usage duration of a pay-per-use cluster is calculated by the second and billed on an hourly basis. You can check the actual usages in a billing cycle against the transaction record. For details, see [Table 7-2](#), [Table 7-3](#), and [Table 7-4](#).

- [Table 7-2](#) describes the cluster management expenditures. Three transaction records were generated.
- [Table 7-3](#) describes the VPC endpoint expenditures. Two VPC endpoints (one for API Server and one for SWR) are required. Three transaction records were generated for each VPC endpoint. A total of six transaction records were generated.
- [Table 7-4](#) describes the expenditures on the pods for running the add-ons. There were four pods. For each pod, one transaction record was generated for the vCPUs and one for the memory every hour. A total of 24 transaction records were generated.

**Table 7-2** Cluster transaction records

<b>Service Type</b>	CCE
<b>Resource Type</b>	CCE Autopilot cluster
<b>Billing Mode</b>	Pay-per-use



<b>Expenditure Time</b>	From 10:09:06 on April 8, 2023 to 12:09:06 on April 8, 2023, three transaction records were generated in the following periods: <ul style="list-style-type: none"> <li>• From 10:09:06 to 11:00:00</li> <li>• From 11:00:00 to 12:00:00</li> <li>• From 12:00:00 to 12:09:06</li> </ul>
<b>List Price</b>	List price = Unit price of the cluster management × Required duration  In this example, the cluster was used for 3,054 seconds in the first billing cycle. If the unit price is \$0.1 USD/hour, the list price is calculated as follows: $0.1 \times (3,054/3,600) = \$0.08483333$ USD. Similarly, you can calculate the list price for the other periods.  For details, see <a href="#">CCE Pricing Details</a> .
<b>Discounted Amount</b>	Discounts offered for cloud services, for example, commercial discounts, partner authorized discounts, and promotional discounts. The discounted amount is based on the list price.
<b>Truncated Amount</b>	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.  Take the first period as an example. The truncated amount is \$0.00483333 USD.
<b>Amount Due</b>	Amount due = List price – Discount amount – Truncated amount Take the first period as an example. If the discount amount is 0, the amount due is \$0.08 USD ( $0.08483333 - 0 - 0.00483333$ ).

**Table 7-3** VPC endpoint transaction records

<b>Service Type</b>	VPC
<b>Product</b>	VPC Endpoint
<b>Billing Mode</b>	Pay-per-use
<b>Expenditure Time</b>	From 10:09:06 on April 8, 2023 to 12:09:06 on April 8, 2023, six transaction records were generated for three periods. Two transaction records were generated in each period. <ul style="list-style-type: none"> <li>• From 10:09:06 to 11:00:00</li> <li>• From 11:00:00 to 12:00:00</li> <li>• From 12:00:00 to 12:09:06</li> </ul>

<b>List Price</b>	<p>List price = Unit price of VPC endpoint × Required duration</p> <p>In this example, two transaction records were generated in the first period, one for the VPC endpoint for API Server and the other for the VPC endpoint for SWR. Both VPC endpoints were used for 3,054 seconds, and the unit price is \$0.014 USD/hour.</p> <ul style="list-style-type: none"> <li>• The list price of one transaction record is calculated as follows: <math>0.014 \times (3,054/3,600) = \\$0.01187667</math> USD.</li> <li>• The list price of the other transaction record is calculated as follows: <math>0.014 \times (3,054/3,600) = \\$0.01187667</math> USD.</li> </ul> <p>Similarly, you can calculate the list price for the other periods. For details, see <a href="#">VPC Endpoint Pricing</a>.</p>
<b>Discounted Amount</b>	<p>Discounts offered for cloud services, for example, commercial discounts, partner authorized discounts, and promotional discounts. It is the discounted amount based on the list price.</p>
<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>The following uses the first period as an example:</p> <ul style="list-style-type: none"> <li>• The truncated amount in one transaction record is \$0.00187667 USD.</li> <li>• The truncated amount in the other transaction record is \$0.00187667 USD.</li> </ul>
<b>Amount Due</b>	<p>Amount due = List price – Discount amount – Truncated amount</p> <p>Take the first period as an example. Assume that the discounted amount is 0.</p> <ul style="list-style-type: none"> <li>• Amount due in one transaction record: <math>0.01187667 - 0 - 0.00187667 = \\$0.01</math> USD</li> <li>• Amount due in the other transaction record: <math>0.01187667 - 0 - 0.00187667 = \\$0.01</math> USD</li> </ul>

**Table 7-4** Pods transaction records

<b>Service Type</b>	CCI
<b>Product</b>	CCI - Autopilot Resources
<b>Billing Mode</b>	Pay-per-use

<b>Expenditure Time</b>	<p>From 10:09:06 on April 8, 2023 to 12:09:06 on April 8, 2023, 24 transaction records were generated for three periods. Four transaction records were generated for vCPUs and four transaction records for memory in each period.</p> <ul style="list-style-type: none"> <li>• From 10:09:06 to 11:00:00</li> <li>• From 11:00:00 to 12:00:00</li> <li>• From 12:00:00 to 12:09:06</li> </ul>
<b>List Price</b>	<p>vCPU list price = Unit price × Number of vCPUs × Required duration Memory list price = Unit price × Memory size × Required duration</p> <p>In this example, in the first period, the unit price of vCPUs is \$0.043 USD/hour per vCPU, and the unit price of memory is \$0.005 USD/hour per GiB. As the number of vCPUs and memory of the four pods are the same, their transaction records are the same.</p> <ul style="list-style-type: none"> <li>• The list price of vCPUs is calculated as follows: <math>0.043 \times (3,054/3,600) \times 1 = \\$0.03647833</math> USD.</li> <li>• The list price of memory is calculated as follows: <math>0.005 \times (3,054/3,600) \times 2 = \\$0.00848333</math> USD.</li> </ul> <p>Similarly, you can calculate the list price for the other periods. For details about the pricing of vCPUs and memory required by pods, see <a href="#">CCE Pricing Details</a>.</p>
<b>Discounted Amount</b>	<p>Discounts offered for cloud services, for example, commercial discounts, partner authorized discounts, and promotional discounts. The discounted amount is based on the list price.</p>
<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>The following uses the first period as an example:</p> <ul style="list-style-type: none"> <li>• The truncated amount in each CPU transaction record is \$0.00647833 USD.</li> <li>• The truncated amount in each memory transaction record is \$0.00848333 USD.</li> </ul>
<b>Amount Due</b>	<p>Amount due = List price - Discount amount - Truncated amount Take the first period as an example. Assume that the discounted amount is 0.</p> <ul style="list-style-type: none"> <li>• Amount due per CPU transaction: <math>0.03647833 - 0 - 0.00647833 = \\$0.03</math> USD</li> <li>• Amount due per memory transaction: <math>0.00848333 - 0 - 0.00848333 = \\$0.00</math> USD</li> </ul>

## CCE Autopilot Cluster Bill Details

You can view the detailed bills of a CCE Autopilot cluster on the [Bills > Expenditure Details](#) page in Billing Center. Bill details can be displayed in multiple

dimensions. Generally, you can set the statistical dimension to usage and statistical period to billing cycle to collect statistics on the total expenditures in a month. You can check the expenditures in each bill against the actual expenditures. For details, see [Table 7-5](#), [Table 7-6](#), and [Table 7-7](#).

- [Table 7-5](#) describes the cluster management expenditures. There is only one bill.
- [Table 7-6](#) describes the VPC endpoint expenditures. Two VPC endpoints (one for API Server and one for SWR) are required. One bill was generated for each VPC endpoint.
- [Table 7-7](#) describes the expenditures on the pods for running the add-ons. There were four pods. For each pod, one bill was generated for the vCPUs and one for the memory. A total of eight bills were generated.

**Table 7-5** Cluster bill details

<b>Service Type</b>	CCE
<b>Resource Type</b>	CCE Autopilot cluster
<b>Billing Mode</b>	Pay-per-use
<b>Resource Name/ID</b>	Specific cluster name and ID. Example: ap-test, 4cdeb1cd-7071-4890-9ce4-e6c2299e960e
<b>Specifications</b>	Cluster management
<b>Usage Type</b>	Duration for pay-per-use billing
<b>Unit Price</b>	In pay-per-use billing, the unit price is only provided in simple pricing (resource usage × unit price). No unit price is provided in other pricing modes, for example, tiered pricing of EIP bandwidths. Simple pricing is used for pay-per-use clusters. For details, see <a href="#">CCE Pricing Details</a> .
<b>Unit</b>	USD/hour
<b>Usage</b>	Depends on the unit of the unit price, which, for a CCE cluster, is USD/hour. Resource usage is billed by hour. In this example, the total usage duration is 2 hours.
<b>Usage Unit</b>	Hour
<b>List Price</b>	List price = Unit price of the cluster management × Required duration  In this example, the cluster was used for 2 hours. If the unit price is \$0.1 USD/hour, the list price is calculated as follows: 0.1 × 2 = \$0.2 USD.

<b>Discounted Amount</b>	Discounts offered for cloud services, for example, commercial discounts, partner authorized discounts, and promotional discounts. The discounted amount is based on the list price.
<b>Amount Due</b>	Amount that should be paid for used cloud services after discounts are applied.

**Table 7-6** VPC endpoint bill details

<b>Service Type</b>	VPC
<b>Product</b>	VPC Endpoint
<b>Billing Mode</b>	Pay-per-use
<b>Resource Name/ID</b>	Name and ID of each VPC endpoint. Example: --, d4797c33-xxx-xxx-xxx-45963dbaf043
<b>Specifications</b>	Basic edition
<b>Usage Type</b>	Duration for pay-per-use billing
<b>Unit Price</b>	In pay-per-use billing, the unit price is only provided in simple pricing (resource usage × unit price). No unit price is provided in other pricing modes, for example, tiered pricing of EIP bandwidths. Simple pricing is used for pay-per-use VPC endpoints. For details, see <a href="#">VPC Endpoint Pricing</a> .
<b>Unit</b>	USD/hour
<b>Usage</b>	Depends on the unit of the unit price, which is USD/hour. Resource usage is billed by the hour. In this example, the total usage duration is 2 hours.
<b>Usage Unit</b>	Hour
<b>List Price</b>	List price = Unit price of VPC endpoint × Required duration In this example, the cluster was used for 2 hours and the unit price is \$0.014 USD/hour. The list price in each bill is: 0.014 × 2 = \$0.028 USD.
<b>Discounted Amount</b>	Discounts offered for cloud services, for example, commercial discounts, partner authorized discounts, and promotional discounts. The discounted amount is based on the list price.
<b>Amount Due</b>	Amount that should be paid for used cloud services after discounts are applied.

**Table 7-7** Pod bill details

<b>Service Type</b>	CCI
<b>Product</b>	CCI - Autopilot Resources
<b>Billing Mode</b>	Pay-per-use
<b>Resource Name/ID</b>	Pod name and CPU/memory ID. Example: <ul style="list-style-type: none"> <li>• vCPU: coredns-798654455c-xxx, cpu.e18ff922-f558-4591-8a9f-xxx</li> <li>• Memory: coredns-798654455c-xxx, memory.e18ff922-f558-4591-8a9f-xxx</li> </ul>
<b>Specifications</b>	Autopilot general-computing CPU or Autopilot general-computing memory resources
<b>Usage Type</b>	Duration for pay-per-use billing
<b>Unit Price</b>	In pay-per-use billing, the unit price is only provided in simple pricing (resource usage × unit price). No unit price is provided in other pricing modes, for example, tiered pricing of EIP bandwidths. Simple pricing is used for pay-per-use vCPU and memory. For details about the pricing of vCPUs and memory required by pods, see <a href="#">CCE Pricing Details</a> .
<b>Unit</b>	USD/s
<b>Usage</b>	Depends on the unit of the unit price, which is USD/s. Resource usage is billed by the second. In this example, the total usage duration is 7,200 seconds.
<b>Usage Unit</b>	Second
<b>List Price</b>	vCPU list price = CPU unit price × Required duration Memory list = Memory unit price × Required duration In this example, the usage duration is 7,200 seconds. <ul style="list-style-type: none"> <li>• If the unit price of a vCPU is \$0.000012 USD/s, the vCPU list price is \$0.0864 USD (0.000012 × 7,200).</li> <li>• If the unit price of memory is \$0.000001 USD/s, the memory list price is \$0.0072 USD (0.000001 × 7,200).</li> </ul>
<b>Discounted Amount</b>	Discounts offered for cloud services, for example, commercial discounts, partner authorized discounts, and promotional discounts. The discounted amount is based on the list price.
<b>Amount Due</b>	Amount that should be paid for used cloud services after discounts are applied.

# 8 Arrears

When the settlement period of a CCE Autopilot cluster 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 CCE Autopilot, you will need to top up your account in a timely manner.

## Reasons of Arrears

- Your account balance is insufficient to cover additional expenditures generated when you use up the package quota.
- You have not purchased a package, and your account balance in pay-per-use billing is insufficient.

## Impacts of Arrears

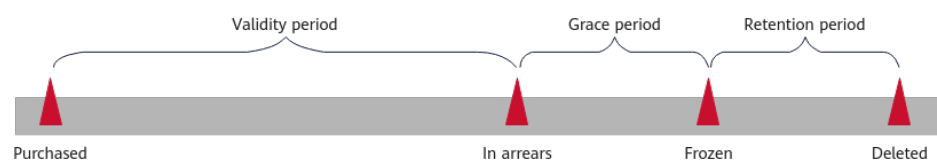
- Pay-per-Use

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 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, clusters and other cloud service resources like EVS disks and EIPs will be released and cannot be restored.

**Figure 8-1** Lifecycle of a pay-per-use resource



 NOTE

- For details about the grace period and retention period, see [What Is a Grace Period?](#) and [What Is a Retention Period?](#).
- Packages  
Package resources: You have paid for the resources in advance. Existing package resources can still be used even if your account is in arrears. However, you cannot perform operations that generate expenditures, such as purchasing new packages and renewing orders.

## Avoiding and Handling Arrears

Top up your account as soon as possible. For details, see [Topping Up an Account](#).

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

If your account is in arrears, top up your account in a timely manner. If the resource usages become stable, you can purchase packages to reduce costs. For details, see [Package Overview](#).



# 9 Billing Termination

If a CCE Autopilot cluster is no longer used, you can delete the cluster and other cloud service resources used in the cluster to avoid extra expenditures.

## Pay-per-Use Resources

If pay-per-use resources, such as clusters and VPC endpoints, are no longer required, you need to delete them in a timely manner.

## Packages

Packages are prepaid and stop automatically when they expire.

- Package unsubscription is not supported. If you stop using packages, the resources in the packages will not be consumed.
- If you have enabled auto-renewal, disable it before the auto-renewal deduction date (default seven days before the expiration date) to avoid generating additional expenditures.

## 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:

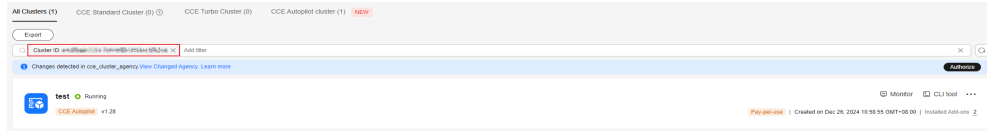
- Step 1** Log in to the Huawei Cloud management console and access Billing Center. In the navigation pane, choose **Billing > Expenditure Items**.
- Step 2** Locate the row that contains the resource and copy the resource ID.


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

Billing...	Account...	Service Type	Resource T...	Billing Mode	Bill Type	Resource NameID	Resource Tag	Specificalti...	Region	AZ	Usage Type	Unit Price	Unit	Total Usage (Pri...	Usage Unit (Per Pric...	Package Usage (Pri...	List Pri...	Discount...	Amount (USD)
Dec	Yellal	Cloud Cont...	CCE Autopilot	Pay-per-use	Expendit...	c2b1a1a1-a1a1-a1a1-a1a1-a1a1-a1a1-a1a1-a1a1	-	CCE Autop...	AP-Rangan	AZ1	Dedicated	0.10	Dollar/Hour	0.51000000	hours	-	0.51000000	0.50	0

**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 2**.

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



**Step 4** Click  in the upper right corner of the cluster and choose **Delete Cluster**.

 **NOTE**

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

----End

# 10 Billing FAQ

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- [How Is a CCE Autopilot Cluster Billed?](#)
- [How Do I Change the Pod CPU/Memory Billing Mode from Pay-per-Use to Package?](#)