# CloudTable Service

# Billing

| | |
|---|---|
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# Contents

# 1 Billing Overview

This topic introduces how CloudTable is billed along with details about billing modes, billing items, renewals, and accounts in arrears.

- **Billing modes**

  - You can create HBase and ClickHouse clusters in CloudTable. These clusters support two billing modes: pay-per-use and yearly/monthly. Yearly/Monthly is a prepaid mode. You need to pay first, and will be billed based on the required duration in your order. Ensure that your account balance is sufficient. Pay-per-use is a postpaid billing mode. You pay as you go and pay for what you use. The cluster usage is calculated by the second but billed every hour.

    For details about billing modes, see **Overview**.

    You can also change the billing mode later if it no longer meets your needs. For details, see **Introduction**.

- **Billed items**

  CloudTable billing items consist of cluster specifications, data storage, and public network bandwidth. For details about the billing factors and formulas for each billing item, see **Billing Item**.

  For details about billing examples in actual scenarios and the fee calculation process of each billing item in different billing modes, see **Billing Examples**.

- **Renewals**

  - CloudTable HBase clusters support yearly/monthly and pay-per-use billing. In pay-per-use billing, fees are deducted every hour. If the account balance is insufficient, you can renew the package on the **Renewals** page. If your subscription is not renewed, your services will keep running, but enter into a grace period. If you do not renew the subscription after the grace period expires, CloudTable clusters will stop running but data is retained during a retention period.

  - CloudTable ClickHouse clusters support two billing modes: the yearly/monthly billing and the pay-per-use billing. An upfront payment is required when you purchase resources. No additional fees are incurred as you use the resources. In pay-per-use mode, fees are deducted every hour. If your account balance is insufficient, you will be in arrears. You can renew your account on the **Renewals** page. If your subscription is not renewed, your services will keep running, but enter into a grace period. If

you do not renew the subscription after the grace period expires, CloudTable clusters will stop running but data is retained during a retention period.

For more details, see **Overview**.

- **Bills**

  You can choose **Billing** > **Bills** to check the transactions and bills. For details, see **Viewing Bills**.

- **Arrears**

  - Yearly/Monthly clusters do not cause arrears.
  - A pay-per-use cluster is billed by hour. If the account balance is insufficient for you to use the cluster for one more hour, the cluster is in arrears and the cluster enters the grace period. If you do not bring your account balance current before the grace period expires, the cluster will be frozen and enter the retention period. You cannot perform any operations on resources in the retention period. If you do not bring your account balance current before the retention period ends, services in the cluster will be terminated and the data in the system will be permanently deleted. If the clusters are renewed within the retention period, they will be available and charged from the original expiration date. For details, see **Arrears**.

- **Billing termination**

  If your no longer need CloudTable, you can unsubscribe from or delete it to stop the billing. For details, see **Billing Termination**.

# 2 Billing Modes

## 2.1 Overview

CloudTable supports pay-per-use and yearly/monthly billing modes to meet user requirements in different scenarios.

- Pay-per-use is a postpaid billing mode. You pay as you go and just pay for what you use. The fees are calculated by second and settled by hour. This mode allows you to adjust resource usage easily. You do not need to prepare resources in advance, and will not have excessive or insufficient preset resources. Pay-per-use is a good option for scenarios where there are sudden traffic bursts, such as e-commerce promotions.
- Yearly/monthly: You pay for the cluster by year or month, in advance.

**Table 2-1** Billing modes

| Billing Mode | Yearly/Monthly | Pay-per-Use |
|---|---|---|
| Payment mode | Prepaid<br>Billed by the subscription term you purchase. | Postpaid<br>Billed by the actual CloudTable usage. |
| Billing usage period | Billed for the required duration specified in your order. | Billed by second and settled by hour. |
| Billing item | HBase: compute specifications, storage specifications, and node quantity.<br>ClickHouse: compute specifications, storage specifications, and node quantity. | HBase: compute specifications, storage specifications, and node quantity.<br>ClickHouse: compute specifications, storage specifications, and node quantity. |

| Billing mode change | The billing mode cannot be changed from yearly/monthly to pay-per-use. | The billing mode can be changed from pay-per-use to yearly/monthly. |
|---|---|---|
| Specification change | <ul><li>You can change the compute specifications, storage specifications, and node quantity of an HBase cluster.</li><li>You can change the node quantity of a ClickHouse cluster.</li></ul> | Specifications can be changed, which affects the pricing.<ul><li>You can change the compute specifications, storage specifications, and node quantity of an HBase cluster.</li><li>You can change the compute specifications, storage specifications, and node quantity of a ClickHouse cluster.</li></ul> |
| Application scenario | A cost-effective option for scenarios where the resource usage duration is predictable. This billing mode is recommended for long-term users. | This mode is ideal when you want more flexibility and control on compute resource usage. |

# 2.2 Yearly/Monthly Billing

Yearly/Monthly billing is a prepaid billing mode in which you pay before using resources. It is suitable when your resource requirements are fixed because you can pay less by using longer. This section describes the billing rules for yearly/monthly CloudTable resources.

## Application Scenario

In yearly/monthly billing mode, you need to pay for a required duration in advance. This mode is suitable for long-term and relatively fixed service requirements. The yearly/monthly billing mode is recommended for the following scenarios:

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

## Billed Items

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

**Table 2-2** Billing items

| Item | Description |
|------|-------------|
| Compute | Compute specifications of a node |
| Storage | Storage specifications and capacity of a node |
| Nodes | Number of nodes |

If you want to purchase a(n) HBase/ClickHouse cluster, the price will be displayed at the bottom of the page, as shown in the following figure.

**Figure 2-1** Example prices for an HBase cluster

**Figure 2-2** Example prices for a ClickHouse cluster



You are charged for:

- Node quantity
- Storage specifications

## Billing Usage Period

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

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

## Billing Examples

Suppose you purchased an instance on March 8, 2023, 15:50:04. The charged resources include compute units and data storage. Assume the subscription is for one month, and will be manually renewed for one month before it expires:

- The first billing period: Mar 08, 2023, 15:50:04–Apr 08, 2023, 23:59:59
- The second billing period: Apr 08, 2023, 23:59:59–May 08, 2023, 23:59:59

You must prepay for each billing period. **Table 2-3** shows the billing formula.

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

| Item | Formula | Unit Price |
|------|---------|------------|
| Compute | Unit price of node specifications x Required duration x Number of nodes | The actual fee depends on the price displayed on the console. |
| Storage | Data storage unit price x Data storage capacity x Number of nodes x Required duration | The actual fee depends on the price displayed on the console. |

> **NOTICE**
>
> The prices in the figure are just examples. The actual prices are those displayed on the Billing Center.

**Figure 2-3** Total price for a yearly/monthly HBase
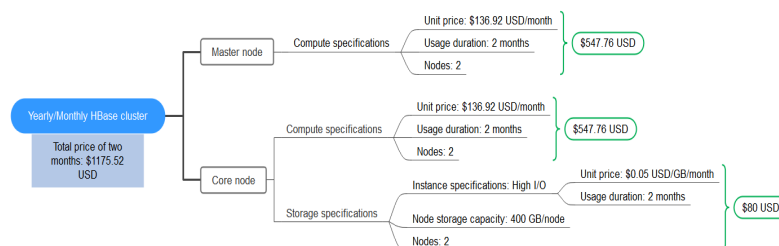


**Figure 2-4** Total price for a yearly/monthly ClickHouse
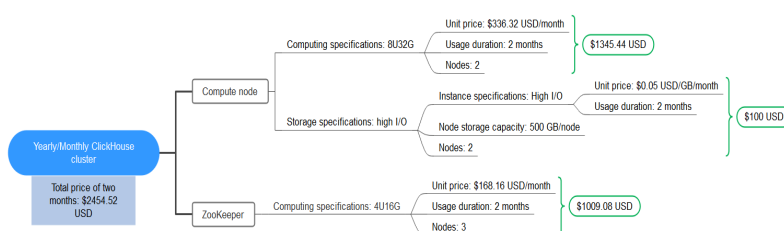


## Impact on Billing After Specification Change

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

- HBase configuration change: horizontal scale-out.
- ClickHouse configuration change: horizontal scale-out, disk capacity expansion, and specification change.

## Impacts of Expiration

**Figure 2-5** shows the statuses a yearly/monthly CloudTable resource can go through throughout its lifecycle. After an instance is purchased, it enters the valid period and runs normally during this period. If the instance is not renewed after it expires, before being deleted, it first enters a grace period and then a retention period.

**Figure 2-5** Lifecycle of a yearly/monthly CloudTable instance



### Expiration Reminder

From the 7th day before a yearly/monthly CloudTable instance expires, the system will send an expiration reminder to the creator of the Huawei Cloud account by email, SMS, and internal message.

### Impact After Expiration

If your yearly/monthly CloudTable instance is not renewed after it expires, it changes to the **Expired** state and enters a grace period. During this period, you can still access CloudTable.
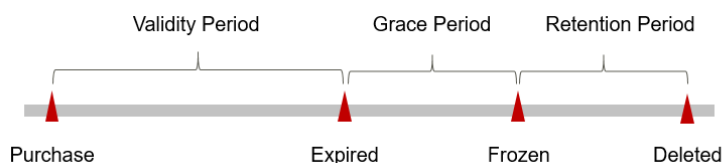
If the yearly/monthly CloudTable instance is not renewed after the grace period ends, its status turns to **Frozen** and it enters a retention period. You cannot perform any operations on the resource while it is in the retention period.

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

📖 NOTE

● For details about renewal, see **Overview**.

# 2.3 Pay-per-Use Billing

Pay-per-use is a billing mode where you pay after using the resources. This billing mode does not require you to make any prepayments or long-term commitments. This section describes the billing rules for pay-per-use CloudTable resources.

## Application Scenario

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

## Billed Items

Pay-per-use billing includes the following billing items:

● HBase

**Table 2-4** HBase billing items

| Item | Description |
|------|-------------|
| Compute | Compute specifications of a node |
| Storage | Storage specifications and capacity of a node |
| Nodes | Number of nodes |

If you want to purchase an HBase cluster, the price will be displayed at the bottom of the page, as shown in **Figure 2-6**.

**Figure 2-6** Example prices for an HBase cluster
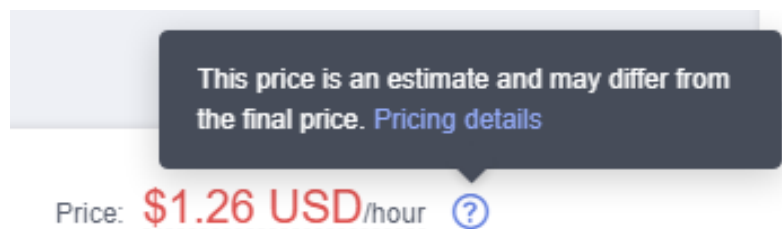


● ClickHouse

**Table 2-5** ClickHouse billing items

| Item | Description |
|------|-------------|
| Compute | Compute specifications of a node |
| Storage | Storage specifications and capacity of a node |
| Nodes | Number of nodes |

If you want to purchase a ClickHouse cluster, the price will be displayed at the bottom of the page, as shown in **Figure 2-7**.
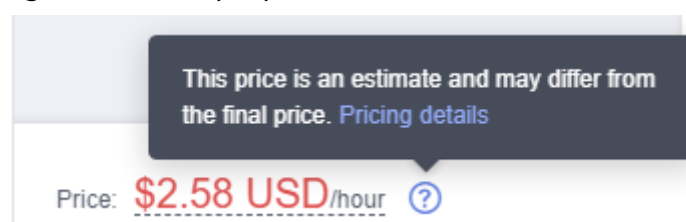
**Figure 2-7** Example prices for a ClickHouse cluster

You are charged for:

– Node quantity

– Storage specifications

## Billing Usage Period

Pay-per-use CloudTable usage is calculated by the second and billed every hour. The billing starts when a cluster is created and ends when the cluster is deleted.

📖 **NOTE**

It takes some time to launch an instance. The billing starts from the **Launched** time on the ECS **Summary** page.

For example, if you purchased a pay-per-use cluster at 8:45:30 and deleted it at 8:55:30, you are billed for the 600 seconds from 8:45:30 to 8:55:30.

## Billing Examples

Suppose you purchased a cluster with a bandwidth of 6Mbit/s on April 18, 2023, 9:59:30 and deleted it on April 18, 2023, 10:45:46. (The charged resources include compute resources, such as vCPU and memory, and bandwidth.)

1. The first billing period is from 9:00:00 to 10:00:00. Fees are generated from 9:59:30 to 10:00:00. The billing duration is 30 seconds within the period.

2. The second billing period is from 10:00:00 to 11:00:00. Fees are generated from 10:00:00 to 10:45:46. The billing duration is 2,746 seconds within the period.

You are billed for both usage periods. ECS resources are billed individually as described in **Table 2-3**. The price displayed in the pricing details is per hour, so you need to divide it by 3,600 to obtain the price for each second and then multiple the per-second price by the total number of seconds.

● HBase billing examples

**Table 2-6** Billing formulas

| Item | Formula | Unit Price |
|------|---------|-----------|
| Compute | Unit price of node specifications x Required duration x Number of nodes | The actual fee depends on the price displayed on the console. |
| Storage | Data storage unit price x Data storage capacity x Number of nodes x Required duration | The actual fee depends on the price displayed on the console. |

**Figure 2-8** shows how the total price is calculated.

> **NOTICE**
>
> The prices in the figure are just examples. The actual prices are those displayed on the Billing Center.

**Figure 2-8** CloudTable HBase cluster billing examples
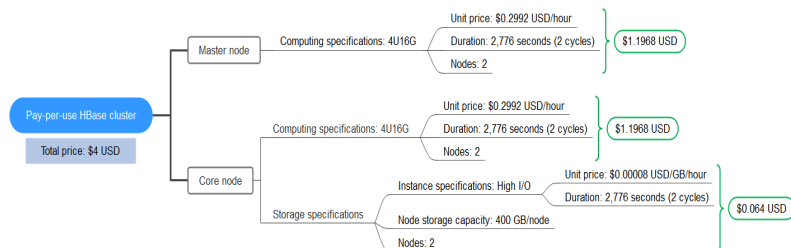


- ClickHouse billing examples

**Table 2-7** Billing formulas

| Item | Formula | Unit Price |
|------|---------|------------|
| Compute | Unit price of node specifications x Required duration x Number of nodes | The actual fee depends on the price displayed on the console. |
| Storage | Data storage unit price x Data storage capacity x Number of nodes x Required duration | The actual fee depends on the price displayed on the console. |

**Figure 2-9** shows how the total price is calculated.

> **NOTICE**
>
> The prices in the figure are just examples. The actual prices are those displayed on **Figure 2-9**.

**Figure 2-9** ClickHouse billing examples
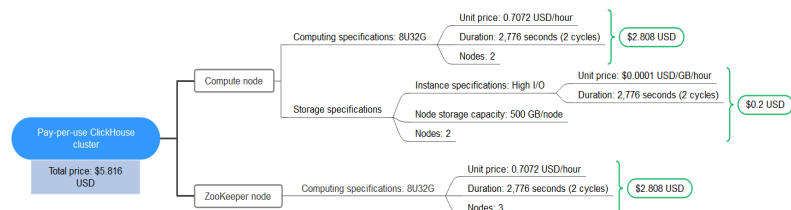
## Impact on Billing After Specification Change

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

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

📖 NOTE

- HBase and ClickHouse clusters are charged by hour. The smallest billing unit for compute unit usage is one hour, and partial hours are counted as full hours.
- Periodic Settlement of Pay-per-Use Products:
  - Settlement by hour: Huawei Cloud calculates the fee based on your usage every hour and deducts the fee from your account. For example, fees incurred from 8:00 to 9:00 are usually deducted before 10:00.
  - Settlement by month: Huawei Cloud calculates the fee based on your usage and deducts the fee of the month at the beginning of the next month. For example, fees incurred from 00:00:00 on April 1, 2019 to 23:59:59 on April 30, 2019 are usually deducted at about 01:00:00 on May 1, 2019.

## Impacts of Arrears

**Figure 2-10** shows the statuses a pay-per-use CloudTable instance can have throughout its lifecycle. After purchasing a resource, it remains operational throughout the billing cycle. This can be referred to as the validity period. If your account is in arrears, the resource enters the grace period and then the retention period.

**Figure 2-10** Lifecycle of a pay-per-use CloudTable resource
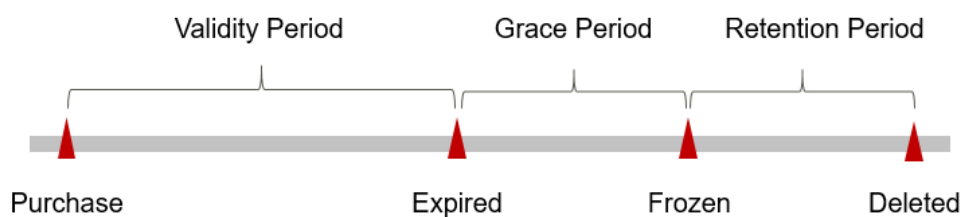


**Arrears notifications**

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

**Impact of arrears**

If your account is insufficient to pay your amount due, your account goes into arrears, and the pay-per-use CloudTable resource enters the grace period. You need to pay the fees of your pay-per-use resource incurred during the grace period. You can click **Billing** in the upper right corner and check the fees on the **Overview** page. Huawei Cloud will deduct the fees after you top up your account.

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

After the retention period ends, the compute resources and EIPs will be released and data cannot be restored.

# 3 Billing Item

CloudTable provides hosting services to easily run big data components such as HBase and ClickHouse. The following table describes the billing details.

## Billing Description

CloudTable billing items are based on cluster specifications.

- HBase and ClickHouse billing items

**Table 3-1** HBase/ClickHouse billing items

| Item | Description | Billing Mode | Formula |
|------|-------------|--------------|---------|
| Compute | You are billed by vCPUs and memory. Compute and storage capabilities vary by the number of vCPUs and memory size. | Pay-per-use and yearly/monthly billing | **Unit price of node specifications x Required duration x Number of nodes** |
| Storage | You are billed by storage capacity based on unified standards. | Pay-per-use and yearly/monthly billing | **Storage unit price x Required duration x Storage capacity x Number of nodes** |

# 4 Billing Examples

## 4.1 HBase Billing Examples

### Billing Scenario

A user purchased a pay-per-use HBase cluster on March 18, 2023, 15:00:00 and used the cluster for one hour. After 0.5 hour, the user added Core nodes for the cluster (from three nodes to six nodes). The user changed the cluster to yearly/monthly on March 18, 2023, 15:59:59 for a long-term use. The validity period was one month, and the cluster expired at 23:59:59 on April 18, 2023. This section shows how to count the total fee for using this cluster. Suppose the cluster specifications are as follows:

- Master node specifications
  - **Compute**: **4U16G**
  - **Storage**: **Ultra-high I/O** and **200 GB/Node**
  - **Nodes**: **3** (The cluster is configured with HA by default, which needs Master nodes. One Master node is provided for free for cluster monitoring.)
- Core node specifications
  - **Compute**: **4U16G**
  - **Storage**: **High I/O** and **400 GB/Node**
  - **Nodes**: **3**

### Billing Analysis

After a period of time, the user found that the current specifications cannot meet service requirements and expanded the cluster capacity on March 18, 2023, 15:30:00. The expanded specifications are as follows:

**Table 4-1** Billing change details

| Billing Mode | Formula | Billing Cycle | Price |
|---|---|---|---|
| Pay-per-use billing (before node addition) | Compute unit fee: Unit price of a compute unit x Number of nodes | Hourly fee | Master nodes: 0.2992 (Unit price of a compute unit: USD/hour) x 2 (Node quantity) x 1 (Usage duration: hour) = $0.5984 USD<br><br>Core nodes: 0.2992 (Unit price of a compute unit: USD/hour) x 3 (Node quantity) x 1 (Usage duration: hour) = $0.8976 USD |
| | Disk fee: Disk unit price x Capacity x Number of nodes | | Core nodes: 0.00008 (Unit price of a disk: USD/hour) x 400 (Disk capacity: GB) x 3 (Node quantity) x 0.5 (Usage duration: hour) = $0.048 USD |
| | | | **Total Price: $1.544 USD** |
| Pay-per-use billing (after node addition) | Compute unit fee: Unit price of a compute unit x Number of nodes | Hourly fee | Master nodes: 0.2992 (Unit price of a compute unit: USD/hour) x 2 (Node quantity) x 1 (Usage duration: hour) = $0.5984 USD<br><br>Core nodes: 0.2992 (Unit price of a compute unit: USD/hour) x 6 (Node quantity) x 1 (Usage duration: hour) = $1.7952 USD |
| | Disk fee: Disk unit price x Capacity x Number of nodes | | Core nodes: 0.00008 (Unit price of a disk: USD/hour) x 400 (Disk capacity: GB) x 6 (Node quantity) x 1 (Usage duration: hour) = $0.192 USD |
| | | | Total price: **$2.5856 USD** |
| Yearly/ Monthly billing | Compute unit fee: Unit price of a compute unit x Number of nodes | Monthly fee | Master nodes: $136.92 (Unit price of a compute unit: USD/month) x 2 (Node quantity) = $273.84 USD<br><br>Core nodes: $136.92 (Unit price of a compute unit: USD/month) x 6 (Node quantity) = $821.52 USD |
| | Disk fee: Disk unit price x Capacity x Number of nodes | | Core nodes: 0.05 (Unit price of a disk: USD/month) x 400 (Disk capacity: GB) x 6 (Node quantity) = $120 USD |

| Billing Mode | Formula | Billing Cycle | Price |
|---|---|---|---|
|  | **Total** |  | **Total Price: $1215.36 USD** |

From March to April, the total fee of the HBase cluster is $1217.9456 USD (2.5856 + 1215.36).

◫ NOTE

- HBase clusters are charged by hour. The smallest billing unit for compute unit usage is one hour, and partial hours are counted as full hours.

- Periodic Settlement of Pay-per-Use Products:

  - Settlement by hour: Huawei Cloud calculates the fee based on your usage every hour and deducts the fee from your account. For example, fees incurred from 8:00 to 9:00 are usually deducted before 10:00.

  - Settlement by month: Huawei Cloud calculates the fee based on your usage and deducts the fee of the month at the beginning of the next month. For example, fees incurred from 00:00:00 on April 1, 2019 to 23:59:59 on April 30, 2019 are usually deducted at about 01:00:00 on May 1, 2019.

# 4.2 ClickHouse Billing Examples

A user purchased a pay-per-use ClickHouse cluster on March 18, 2023, 15:00:00 and used the cluster for one hour. After 0.5 hour, the user changed the specifications of the ClickHouse node from 4 vCPUs and 16 GB memory to 8 vCPUs and 32 GB memory. The user changed the cluster to yearly/monthly on March 18, 2023, 15:59:59 for a long-term use. The validity period was one month, and the cluster expired at 23:59:59 on April 18, 2023. This section shows how to count the total fee for using this cluster. Suppose the cluster specifications are as follows:

- Compute node specifications

  - **Compute**: **8U32G**

  - **Storage**: **High I/O** and **500 GB/Node**

  - **Nodes**: **2**

- ZooKeeper node specifications

  - **Compute**: **4U16G**

  - **Storage**: **Ultra-high I/O** and **100 GB/Node**

  - **Nodes**: **3** (This is a default value and cannot be changed.)

## Billing Analysis

Based on this example, you can calculate the consumption before and after the specification change.

**Table 4-2** Billing change details

| Billing Mode | Formula | Billing Cycle | Price |
|---|---|---|---|
| Pay-per-use billing (before specification change) | Compute unit fee: Unit price of a compute unit x Number of nodes | Hourly fee | Compute nodes: 0.7072 (Unit price of a compute unit: USD/hour) x 2 (Node quantity) x 1 (Usage duration: hour) = $1.4144 USD<br><br>ZooKeeper nodes: 0.3536 (Unit price of a compute unit: USD/hour) x 3 (Node quantity) x 1 (Usage duration: hour) = $1.0608 USD |
| | Disk fee: Disk unit price x Capacity x Number of nodes | | Compute nodes: 0.0001 (Unit price of a disk: USD/hour) x 500 (Disk capacity: GB) x 2 (Node quantity) x 0.5 (Usage duration: hour) = $0.05 USD<br><br>ZooKeeper node disk fee: 0 |
| | | | Total fee: **$2.5252 USD** |
| Pay-per-use billing (after specification change) | Compute unit fee: Unit price of a compute unit x Number of nodes | Hourly fee | Compute nodes: 0.7072 (Unit price of a compute unit: USD/hour) x 2 (Node quantity) x 1 (Usage duration: hour) = $1.4144 USD<br><br>ZooKeeper nodes: 0.7072 (Unit price of a compute unit: USD/hour) x 3 (Node quantity) x 1 (Usage duration: hour) = $2.1216 USD |
| | Disk fee: Disk unit price x Capacity x Number of nodes | | Compute nodes: 0.0001 (Unit price of a disk: USD/hour) x 500 (Disk capacity: GB) x 2 (Node quantity) x 1 (Usage duration: hour) = $0.10 USD<br><br>ZooKeeper node disk fee: 0 |
| | | | Total price: **$3.636 USD** |
| Yearly/Monthly billing | Compute unit fee: Unit price of a compute unit x Number of nodes | Monthly fee | Compute nodes: $336.32 (Unit price of a compute unit: USD/month) x 2 (Node quantity) = $672.64 USD<br><br>ZooKeeper nodes: 336.32 (CU unit price: ¥/month) x 3 (nodes) = $1008.96 USD |

| Billing Mode | Formula | Billing Cycle | Price |
|---|---|---|---|
| | Disk fee: Disk unit price x Capacity x Number of nodes | | Compute nodes: 0.05 (Unit price of a disk: USD/hour) x 500 (Disk capacity: GB) x 2 (Node quantity) = $50 USD<br>ZooKeeper node disk fee: 0 |
| | **Total** | | **Total fee: $1731.60 USD** |

 NOTE

- ClickHouse clusters are charged by hour. The smallest billing unit for compute unit usage is one hour, and partial hours are counted as full hours.
- Periodic Settlement of Pay-per-Use Products:
  - Settlement by hour: Huawei Cloud calculates the fee based on your usage every hour and deducts the fee from your account. For example, fees incurred from 8:00 to 9:00 are usually deducted before 10:00.
  - Settlement by month: Huawei Cloud calculates the fee based on your usage and deducts the fee of the month at the beginning of the next month. For example, fees incurred from 00:00:00 on April 1, 2019 to 23:59:59 on April 30, 2019 are usually deducted at about 01:00:00 on May 1, 2019.

From March to April, the total fee of the ClickHouse cluster is $1735.236 USD (3.636+17.31.60).

# 5 Billing Mode Change

## 5.1 Introduction

You can change the billing mode later if it no longer meets your needs. **Table 5-1** lists the billing items that support billing mode change.

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

| Item | Description | Reference |
|------|-------------|-----------|
| Cluster specifications | Note: | **Changing the Billing Mode from Pay-per-Use to Yearly/Monthly** |
| Storage capacity | You can change the billing mode of CloudTable cluster specifications from pay-per-use to yearly/monthly to enjoy price discounts.<br><br>**NOTE**<br>The change takes effect only after the yearly/monthly subscription expires. | |

## 5.2 Changing the Billing Mode from Pay-per-Use to Yearly/Monthly

If you have a pay-per-use instance that you expect to use for a long time, you can change it to yearly/monthly billing to reduce costs. By doing so, a new order is generated and the yearly/monthly resource takes effect immediately after you pay the order.

Assume that you bought a pay-per-use CloudTable instance on Apr 18, 2023, 15:29:16, and you changed the instance's billing mode to yearly/monthly on Apr

18, 2023, 16:30:30 (a change-to-yearly/monthly order generated). After the user paid for the order, yearly/monthly billing was applied immediately. Hover over **Billing** in the upper part of the console and choose **Bills** from the drop-down list. On the **Bills** page, three bills are generated as follows:

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

> **NOTE**
>
> After creating a pay-per-use cluster, you need to wait for 5 minutes before changing the billing mode to yearly/monthly.

## Prerequisites

- The billing mode of the target CloudTable cluster is pay-per-use.
- The target CloudTable cluster is in the **Running** state.

## Procedure

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

**Step 2** Click **Cluster Management**.

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

> **NOTE**
>
> You can also click **Change to Yearly/Monthly** on the cluster details page to change the billing mode.

**Step 4** On the displayed page, select the required duration and click **Pay**.

**Step 5** On the payment page, select a payment method and click **Pay**.

**Step 6** Return to the cluster list, click the target cluster to check the billing mode on its details page.

**----End**

# 6 Renewal

## 6.1 Overview

### Introduction

CloudTable supports two billing modes: the yearly/monthly billing and the pay-per-use billing.

- In yearly/monthly mode, you pay only once when purchasing the service and no extra fees will be charged during your use of the service. After a yearly/monthly subscription expires, the resources will enter a retention period. If you want to continue using the resources, renew the subscription. For details, check the resource expiration rules.
- In pay-per-use (hourly) mode, the system settles the fees by hour. You can use CloudTable as long as your account balance is sufficient. If your account balance is insufficient, it will be in arrears. Top up your account.

### Renewing a Yearly/Monthly CloudTable Instance

You can renew a yearly/monthly instance manually or automatically. For details, see **Table 6-1**.

**Table 6-1** Renewing a yearly/monthly CloudTable instance

| Option | Description |
|---|---|
| **Manually Renewing a CloudTable Instance** | You can renew a yearly/monthly CloudTable instance anytime on the console before it is automatically deleted. |

| Option | Description |
|---|---|
| **Auto-Renewing a CloudTable Instance** | After auto-renewal is enabled, CloudTable automatically renews the subscription before the subscription expires. This prevents resources from being automatically deleted if you forget to manually renew the subscription. |

You can renew your subscription across the life cycle of your yearly/monthly CloudTable cluster, as shown in **Figure 6-1**.

**Figure 6-1** Cluster lifecycle
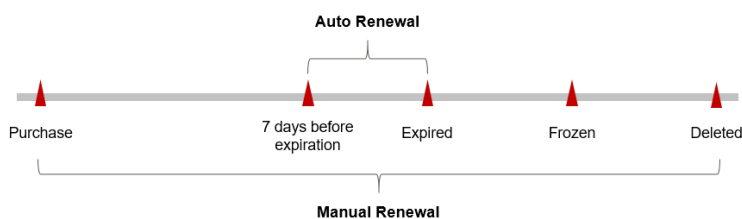


- A CloudTable instance is in the **Running** state after it is provisioned.
- When the subscription expires, the status will change from **Running** to **Expired**.
- If an expired CloudTable instance is not renewed, it enters a grace period. If it is not renewed by the time the grace period expires,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

You can enable auto-renewal any time before a CloudTable instance expires. By default, the system will make the first attempt to charge your account for the renewal at 03:00, seven days before the expiry date. If this attempt fails, it will make another attempt at 03:00 every day until the subscription is renewed or expires. Renewing resources 7 days before expiration is a default value. You can change it if needed.

# 6.2 Manually Renewing a CloudTable Instance

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

## Pay-per-Use Billing

To top up your account, perform the following steps:

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

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

**Step 3** Click **Overview** in the navigation tree and click **Top Up** to top up your account. For details, see "Topping Up an Account".

**----End**

## Renewing a CloudTable Instance in Billing Center

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

**Step 2** Choose **Billing** > **Renewal** on the top menu bar.

**Step 3** Select 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.

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

**Step 4** Manually renew resources.

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

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

**Step 5** Select a renewal duration and optionally select **Renew on the standard renewal date**. Confirm the configuration fee and click **Pay**.

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

**----End**

## Renewing a CloudTable Cluster on the Cluster Management Page

1. Log in to the CloudTable console.

2. Select the cluster to be renewed and choose **More** > **Renew** in the **Operation** column.

3. Click **Pay** in the lower right corner of the page. On the payment page that is displayed, select a payment method and confirm the payment.

## Setting a Fixed Renewal Date

If your CloudTable instances have different expiry dates, you can set the same renewal day to make it easier to manage renewals.

**Figure 6-2** shows a user enabling a renewal date and renewing two resources for one month, each expiring at a different time.

**Figure 6-2** Setting a fixed renewal date
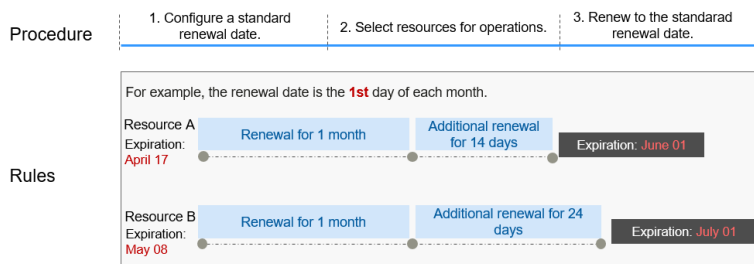


## 6.3 Auto-Renewing a CloudTable Instance

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

- The first auto-renewal date and billing cycle are calculated based on the expiration date of the subscription.

- The CloudTable is auto-renewed for the renewal duration you select. For example, if you select a 3-month renewal period, your instance is automatically renewed for three months every time before it expires.

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

- After auto-renewal is enabled, you can still manually renew your CloudTable cluster. 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 charge is deducted from your account seven days before the new expiry date. You can change this auto-renewal payment date as required.
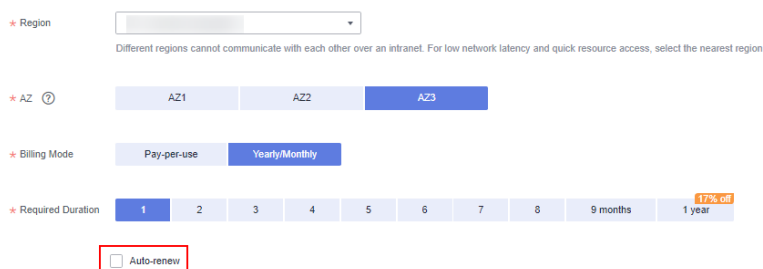
### Prerequisites

Your yearly/monthly CloudTable cluster has not expired.

### Enabling Auto-Renewal During Purchase

You can enable auto-renewal on the page for purchasing yearly/monthly CloudTable clusters, as shown in **Figure 6-3**.

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

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

- Your subscription will be renewed each month for monthly billing.
- Your subscription will be renewed each year for yearly billing.

## Enabling Auto-Renewal on the Renewals Page

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

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

The **Renewals** page is displayed.

**Step 3** Select the search criteria.

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

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

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

**Figure 6-4** Enabling auto-renew for a single resource



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

**Figure 6-5** Enabling auto-renew for multiple resources



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

If auto-renew is enabled on the **Renewals** page, the auto-renew period is subject to the selected renewal period and auto-renew times. For example, if you set **New Auto-Renew Period** to **3 months** and **Auto-renewals** to **Unlimited**, your subscription is automatically renewed for three months before it expires.

**Figure 6-6** Enabling auto-renew
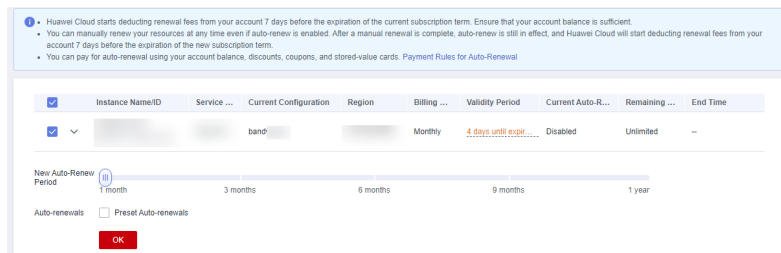


**----End**

# 7 Viewing Bills

Hover over **Billing** in the upper part of the console and choose **Bills** from the drop-down list. On the **Bills** page, you can view the resource bills to learn about the usage and charging information of the resource in a certain period.

## Billing Generation

After yearly/monthly resources are paid, a bill is reported to the billing system for settlement.

The usage of pay-per-use resources is reported to the billing system at a fixed interval. Pay-per-use resources can be settled by hour, day, or month based on usage type.

Pay-per-use CloudTable clusters are settled by hour and you are not charged immediately after a record is generated.

## Viewing Bills of a Specified Resource

**Step 1** Choose **Analytics** > **CloudTable Service** to access the CloudTable console.

**Step 2** Copy the cluster name on the cluster list page.

**Step 3** Hover over **Billing** in the upper part of the console and choose **Bills** from the drop-down list.

**Step 4** Hover over **Billing** and choose **Bills**. Click **Transactions and Detailed Bills** and click **Bill Details**. On the displayed page, select **Resource Name/ID** in the **Sort By** area, enter the copied instance name to search for the bill of the resource.

**Figure 7-1** Bill details
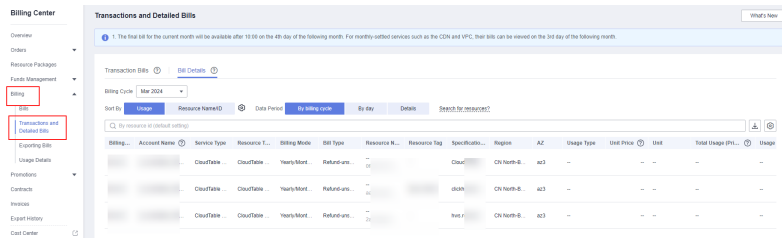


**----End**

# 8 Arrears

When you use CloudTable, if you have a past due balance on your account, your account will fall into arrears. To continue using CloudTable, top up your account in time.

## Reasons

Your account balance is insufficient to pay for the used resources on the pay-per-use basis, and you do not have any resource packages either.

## Impacts of Arrears

- Yearly/Monthly billing

  This is a pre-paid billing mode, so you can continue using yearly/monthly clusters even if your account is in arrears. However, you cannot perform operations that will generate new expenditures, such as purchasing clusters, expanding capacity, and renewing orders.

- Pay-per-use billing

  Your account may fall into arrears due to automatic fee deduction for pay-per-use resources. In this case, relevant cloud services will not be stopped immediately. There will be a grace period for pay-per-use resources. You are still responsible for expenditures generated during the grace period. You can view the charges on the **Billing Center** > **Overview** page and pay any past due balance as needed.

  If 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.

  If you do not bring your account balance current before the retention period ends, the compute resources (vCPUs and memory), EVS disks, and EIPs will be released and the data cannot be restored.

**Figure 8-1** Life cycle of a pay-per-use CloudTable cluster
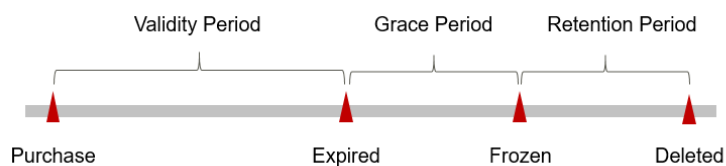


## Avoiding and Handling Arrears

To help make sure your account never falls into arrears, delete the resources that you no longer need or configure the balance alert.

Top up your account in time to avoid arrears.

Delete unnecessary instances to avoid unexpected fees.

To help make sure your account never falls into arrears, you can configure the **Balance Alert** on the **Overview** page of Billing Center. Then, any time an expenditure quota drops to below the threshold you specify, Huawei Cloud automatically notifies you by SMS or email.

If your account is in arrears, address the issue in a timely manner.

# 9 Billing Termination

The following describes how to stop billing in pay-per-use and yearly/monthly.

## Yearly/Monthly Resources

You pay for a resource billed in yearly/monthly mode, such as a yearly/monthly CloudTable cluster, when you purchase it. Billing automatically stops when the subscription expires.

- You can unsubscribe from a yearly/monthly resource before the subscription expires. Fees for unused resource will be refunded to you based on refund conditions, including the five-day unconditional unsubscription conditions and whether cash coupons or discount coupons are used. For details about unsubscription rules, see **Unsubscriptions**.

- If you have enabled auto-renewal, disable it before the deduction date (seven days before the expiration date by default) to avoid being charged.

## Pay-per-Use Billing

If a CloudTable cluster is no longer needed, you can delete it to stop billing.

## Yearly/Monthly Unsubscription

- Prerequisites: The cluster billing mode is **Yearly/Monthly**.
- Unsubscribing from a yearly/monthly cluster
    a. Log in to the CloudTable console.
    b. Click **Cluster Management**.
    c. In the **Operation** column of a cluster, choose **More** > **Unsubscribe**.

**Figure 9-1** Unsubscribing/Releasing
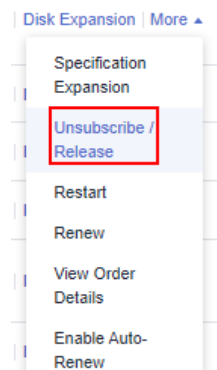


d.   In the displayed dialog box, confirm the warning message, and click **OK**.

e.   On the displayed page, select the unsubscription reason and confirm the prompt message. After the unsubscription, resources that are not moved to the recycle bin will be immediately deleted and cannot be restored. Back up the data you may use in the future and click **Confirm**.

**Figure 9-2** Unsubscribing from resources
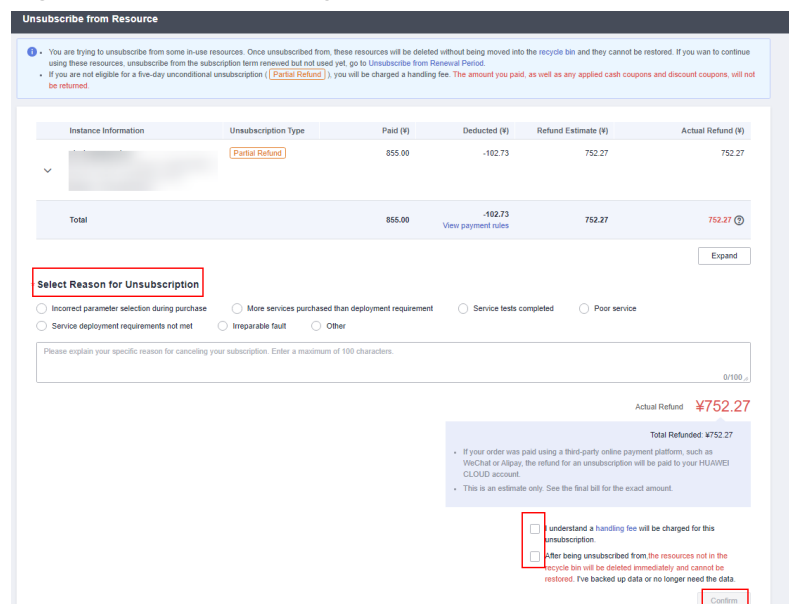


f.   Confirm the information shown in the displayed dialog box to complete the unsubscription.

## Searching for Resources from Bills and Stopping Billing

From bills, you can find the names of all resources that incur fees. Then find the specific resources on the CloudTable console based on the names, and delete these resources.

**Step 1**   Log in to CloudTable console.

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

**Step 3**   Choose **Transactions and Detailed Bills** and click **Bill Details**. From there, click the icon shown in the following figure to copy the resource name.

**Figure 9-3** Copying the resource name
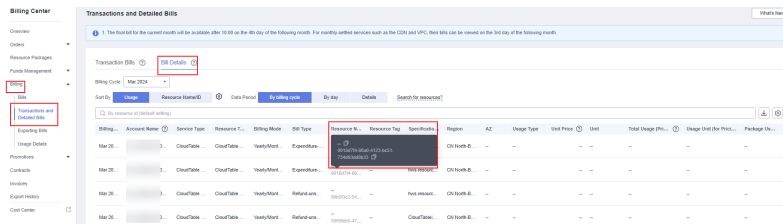


**Step 4** Choose **Analytics** > **CloudTable Service** to access the CloudTable console.

**Step 5** Select the region where the resource is located. On the cluster management page, locate the CloudTable cluster based on the cluster name, and choose **More** > **Unsubscribe/Release** in the **Operation** column to delete it. You can go back to the cluster list and ensure that the resource is no longer displayed in the list.

**Figure 9-4** Unsubscribing/Releasing the resource
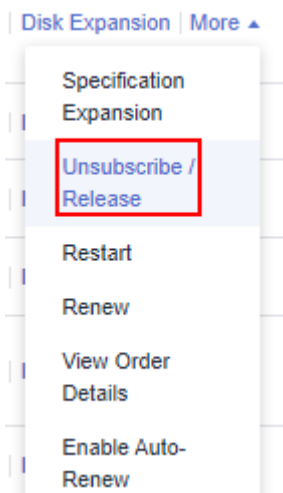


**----End**

📖 **NOTE**

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

# 10 Billing FAQs

## 10.1 Why Is the Purchase Button Unavailable When I Create a Cluster?

The possible causes include:

- Some desired specifications could have been sold out or even are not available in this region.

  Solution: Check the available specifications in this region in advance.

- The account could be in arrears or restricted, so clusters cannot be created.

  Solution: If your balance is insufficient, top up the account to write off the overdue amount.

## 10.2 How Do I Unfreeze a Cluster?

Cause analysis: If your account balance is insufficient and fee deduction fails, a retention period starts. During the retention period, the service resources are frozen and cannot be used, but resources and data are reserved.

Solution: To unfreeze the clusters, you need to top up your account to ensure that the account balance is not **0**. For details, see **Renewal**. After a cluster is unfrozen, the cluster status changes to **Available**.

## 10.3 How Do I Unfreeze Cloud Service Resources?

Resources can be frozen due to arrears, violations, or public security issues.

### Unfreezing Resources

- Frozen due to arrears: You can renew or top up your account to unfreeze your instances. You can renew and delete the instances that are frozen due to arrears. Particularly, you can only unsubscribe from yearly/monthly instances that are not expired.

- Frozen due to violation detected by Huawei Cloud: You can renew or delete such instances. Only yearly/monthly instances that have not expired can be unsubscribed.
- Frozen due to violation detected by the public security department: You can renew such instances, but cannot delete them. Such frozen instances cannot be unsubscribed although they are displayed on the unsubscription page.

## What Impact Does Resource Freezing, Unfreezing or Release Have on My Resources?

- When resources are frozen, resource access and usage are restricted, which will interrupt your services. For example, if a server is frozen, it will be automatically stopped.
- When resources are unfrozen, restrictions on resources are removed, but you need to check and restore your services. For example, after a yearly/monthly instance is unfrozen, it will be automatically started. After a pay-per-use instance is unfrozen, you need to start it manually.
- When resources are released, data stored on the resources will be deleted and cannot be retrieved.