

# Cloud Firewall

## Billing Description

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# Contents

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|  |           |
|--|-----------|
| <b>1 Billing Overview</b>  | <b>1</b>  |
| <b>2 Billing Mode</b>  | <b>3</b>  |
| 2.1 Overview   | 3         |
| 2.2 Yearly/Monthly Billing   | 4         |
| 2.3 Pay-per-Use Billing  | 8         |
| <b>3 Billing Items</b>   | <b>11</b> |
| <b>4 Billing Examples</b>  | <b>14</b> |
| <b>5 Billing Mode Changes</b>  | <b>16</b> |
| <b>6 Renewing Subscriptions</b>  | <b>17</b> |
| 6.1 Overview   | 17        |
| 6.2 Manually Renewing CFW  | 18        |
| 6.3 Auto-renewing CFW  | 20        |
| <b>7 Bills</b>   | <b>22</b> |
| <b>8 Arrears</b>   | <b>24</b> |
| <b>9 Billing Termination</b>   | <b>26</b> |
| <b>10 Cost Management</b>  | <b>27</b> |
| <b>11 Billing FAQs</b>   | <b>32</b> |
| 11.1 How Is VPC Border (East-West) Traffic Charged?                        | 32        |
| 11.2 How Is CFW Billed?  | 32        |
| 11.3 How Do I Change My CFW Edition?                                       | 32        |
| 11.4 Can I Switch Between Yearly/Monthly and Pay-per-Use Payments for CFW? | 33        |
| 11.5 How Do I Renew CFW?   | 33        |
| 11.6 How Do I Unsubscribe from CFW?  | 34        |

# 1 Billing Overview

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In this document, you will learn about how Cloud Firewall (CFW) is billed, how you can renew subscriptions and manage costs, and what happens if your account goes into arrears.

- **Billing Mode**

CFW provides two billing modes, yearly/monthly and pay-per-use billing, to meet requirements in different scenarios. Yearly/Monthly: You pay upfront for the amount of time you expect to use the service for. You will need to make sure you have a top-up account with a sufficient balance or have a valid payment method configured first. Pay-per-use: You can start using the CFW first and then pay as you go. For more information, see [Overview](#).

- **Billed Items**

You will be billed for public IP addresses at the protected Internet border, peak traffic at the protected Internet border, and protected VPCs. For details about the billing factors and formulas for each billed item, see [Billing Items](#).

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

- **Renewing Subscriptions**

If you want to continue using CFW after it expires, you need to renew the CFW subscription within the specified period. Otherwise, resources, such as protection configuration and attack logs, will be automatically released, and data may be lost. You can renew your subscription manually or automatically. For details, see [Overview](#).

- **Viewing Bills**

You can view transaction records and detailed bills related to CFW on the **Billing & Costs > Bills** page. For details, see [Bills](#).

- **Arrears**

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

- **Stopping Billing**

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

- **Managing Costs**

CFW costs mainly include resource costs. You can manage costs from cost composition, allocation, analysis, and optimization. For details, see [Cost Management](#).

# 2 Billing Mode

## 2.1 Overview

CFW provides two billing modes, yearly/monthly and pay-per-use billing, to meet requirements in different scenarios.

- Yearly/Monthly billing is a prepaid mode in which you pay for the service before using it. Your bill is settled based on the required period. The longer the subscription term, the bigger the discount. Yearly/Monthly billing is a good option for long-term, stable services.
- Pay-per-use is a postpaid billing mode. You pay as you go and just pay for what you use. The CFW usage is calculated by the second but billed every hour. With the pay-per-use billing mode, you can easily adapt to resource requirement changes, reducing the risk of over-provisioning of resources or lacking capacity. In this mode, there are no upfront commitments required. Pay-per-use billing is a good option for scenarios where there are sudden traffic bursts, such as e-commerce promotions.

**Table 2-1** lists the details about the yearly/monthly billing modes.

**Table 2-1** Billing mode

| Billing Mode   | Yearly/Monthly  | Pay-per-use   |
|----------------|---|---|
| Payment        | Prepaid<br>Billed by the subscription term you purchase | Postpaid<br>Calculated based on the actual usage duration and traffic processed by the CFW. |
| Billing Period | Billed by the subscription term you purchase            | Billed by the second and settled by the hour  |

| Billing Mode                | Yearly/Monthly   | Pay-per-use  |
|-----------------------------|--|--|
| Billing Item                | <ul style="list-style-type: none"> <li>• Edition</li> <li>• Number of extended packages (added EIP protection capacity, added peak traffic protection capacity, and added VPCs)</li> </ul>   | <ul style="list-style-type: none"> <li>• Edition</li> <li>• Usage duration</li> </ul>        |
| Changing the Billing Mode   | The billing mode cannot be changed to pay-per-use.   | The billing mode cannot be changed to yearly/monthly.  |
| Changing the Specifications | Service version specifications can be changed.   | N/A  |
| Application Scenarios       | <p>It is suitable when your resource usage duration is predictable because you can pay less by using longer.</p> <p>It is more favorable than pay-per-use billing mode. Recommended for resources expected to be in use long-term.</p> | Recommended when the resource demands are likely to fluctuate and you want more flexibility. |

## 2.2 Yearly/Monthly Billing

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

### Application Scenarios

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

- Long-term workloads with stable resource requirements
- For long-term projects
- Workloads with predictable traffic bursts
- Workloads with high data security requirements

### Billed Items

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

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

| Billing Item     |  | Description  |
|------------------|--|--|
| Edition          |  | Edition of the purchased service   |
| Extended package | Protected EIPs at Internet boundary          | If you have purchased a yearly/monthly CFW edition, the extended package is also billed on a yearly/monthly basis. |
|                  | Peak protection traffic at Internet boundary |  |
|                  | Protected VPCs                               |  |

## Billed Usage Period

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

For example, if you purchased a one-month CFW instance on June 30, 2023, 15:50:04, the billed usage period is from June 30, 2023, 15:50:04 to July 30, 2023, 23:59:59.

## Billing Examples

Suppose you purchased a one-month CFW subscription on June 30, 2023, 15:50:04 (edition: professional; extended package: one added EIP, 5 Mbit/s peak protection traffic, and one added VPC). Billing resources include the professional edition and extended package (added EIPs, added peak traffic protection capacity, and added VPCs). Your subscription is one month and you manually renew the subscription for another month before the subscription expires. The billing details are as follows:

- The first billing period is from 15:50:04 on June 30, 2023 to 23:59:59 on July 30, 2023.
- The second billing period is from 23:59:59 on July 30, 2023 to 23:59:59 on Aug. 30, 2023.

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

**Table 2-3** Formula

| Product Information | Formula  |
|---------------------|--|
| Edition             | Price of the purchased service edition x Required duration |



| Product Information                  | Formula   |
|--------------------------------------|---|
| Add EIP protection capacity          | Unit price of expansion package for the protected public IP address x Number of protected public IP addresses x Required duration |
| Add peak traffic protection capacity | Unit price of expansion package for the peak protection traffic x Traffic x Required duration                                     |
| Added VPCs                           | Unit price of VPC expansion package x Number of VPCs x Required duration  |

Figure 2-1 shows how the total price is calculated.

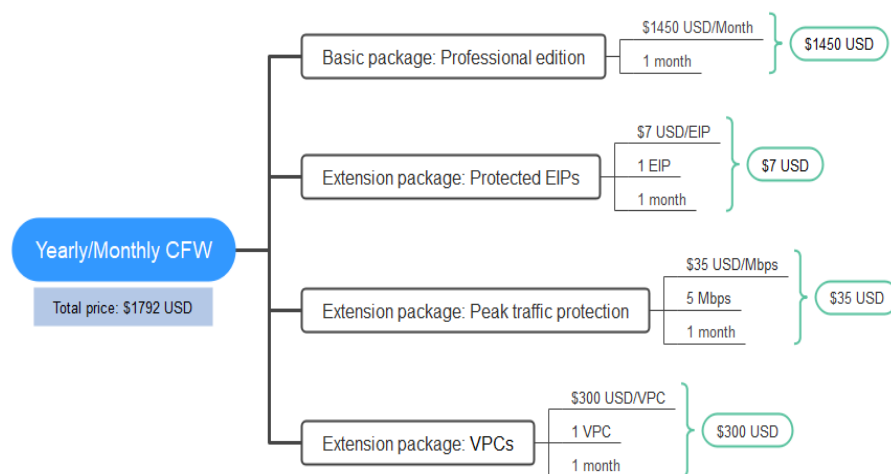
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NOTICE

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

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Figure 2-1 Total price for a yearly/monthly CFW



## Price Change After Specification Change

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

- If you upgrade your CFW specifications, you need to pay the difference in price.

Suppose there is no discount for resource upgrade and you purchased a one-month standard edition CFW with one EIP and 5 Mbit/s peak traffic on June 8, 2023, and added one VPC on June 18, 2023. The price of the original specifications

was \$462 USD/month, and that for the new specifications was \$1792 USD/month. The price difference will be calculated as follows:

**Specification upgrade fee = New specification price × Remaining period - Old specification price × Remaining period**

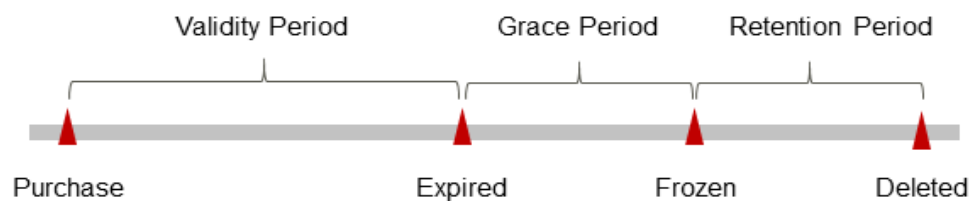
The remaining period is the remaining days of each calendar month divided by the maximum number of days in each calendar month. In this example, Remaining period = 12 (Remaining days in June)/30 (Maximum number of days in June) + 8 (Remaining days in July)/31 (Maximum number of days in July) = 0.6581. Cost of upgrade = 1792 × 0.6581 - 462 × 0.6581 = \$875.273 USD

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

## Impact of Expiration

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

**Figure 2-2** Lifecycle of yearly/monthly CFW resources



### Expiration Reminder

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

### Impact After Expiration

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

If you do not renew your yearly/monthly CFW instance before the grace period ends, it goes into the retention period and its status turns to **Frozen**. You cannot perform any operations on such instances in the retention period.

If the yearly/monthly CFW resources are not renewed by the time the retention period ends, the CFW instance and protection configurations will be released and data cannot be restored.

#### NOTE

- Huawei Cloud offers a 15-day grace period and a 15-day retention period.
- For details about renewal, see [Overview](#).

## 2.3 Pay-per-Use Billing

Pay-per-use billing means you pay nothing up front and are not tied into any contract or commitment. Only CFW of professional edition supports the pay-per-use billing mode.

This section describes the billing rules for pay-per-use CFW resources.

### Application Scenarios

Pay-per-use billing is good for short-term, bursty, or unpredictable workloads that cannot tolerate any interruptions, such as applications for e-commerce flash sales and temporary testing.

### Billed Items

Service edition: the purchased service edition. Only CFW of professional edition supports the pay-per-use billing mode.

Actual traffic (GB): total traffic generated during service usage.

### Billed Usage Period

Pay-per-use CFW resources are billed by second. Bills are settled on each integer hour (UTC+ 08:00). After the settlement is complete, a new billing period starts. The billing starts when the CFW instance is launched and ends when the instance is deleted.

#### NOTE

It takes a certain time to launch a CFW instance. The billing starts from the time when the CFW instance is successfully created.

For example, if you purchased a pay-per-use CFW of the professional edition at 8:45:30 and deleted it at 8:55:00, you are billed for the 600 seconds from 8:45:30 to 8:55:30.

### Billing Examples

Suppose you purchased a pay-per-use CFW of the professional edition on April 18, 2024, 9:59:30 and deleted it on April 18, 2024, 10:45:46. During the usage period, a maximum of 10 GB traffic was generated. The billing resources include the service edition (professional edition) and the generated traffic (10 GB). Two usage periods will be billed:

- Usage of 30 seconds from 9:59:30 to 10:00:00 (between 9:00:00 and 10:00:00)
- Usage of 2,746 seconds from 10:00:00 to 10:45:46 (between 10:00:00 and 11:00:00)

You need to pay for each billing cycle. Each resource is billed separately. For details, see [Formula](#). The prices 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.

**Table 2-4** Formula

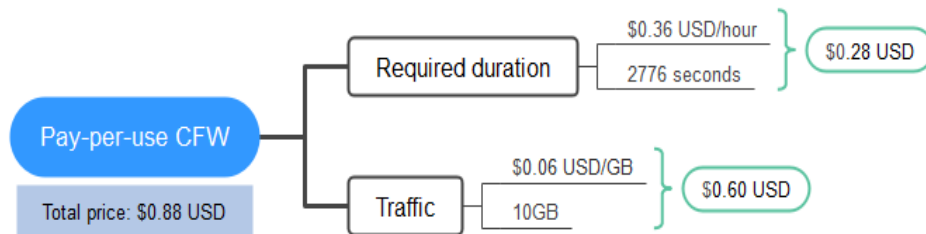
| Resource        | Formula                                  |
|-----------------|--|
| Service edition | Service edition x Required duration      |
| Actual traffic  | Used traffic x Unit price of the traffic |

**Figure 2-3** shows the billing calculation.

**NOTICE**

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

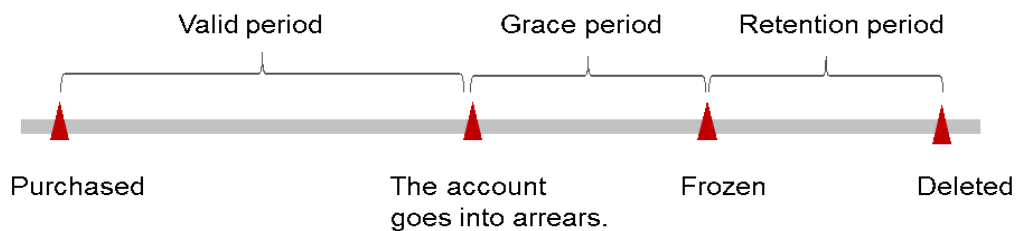
**Figure 2-3** Total price for a pay-per-use CFW instance



## Impact of Arrears

**Figure 2-4** shows the statuses a pay-per-use CFW can have throughout its lifecycle. After a CFW is purchased, it enters the validity period and runs normally during this period. If your account goes into arrears, the CFW instance enters a grace period and then a retention period.

**Figure 2-4** Lifecycle of a pay-per-use CFW



### Arrears Reminder

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

### Impact of Arrears

Your account may fall into arrears if it cannot cover the bill you need to pay. 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 you do not bring your account current before the grace period expires, CFW resources turn to **Frozen** and enter a retention period. You cannot perform any operations on a pay-per-use CFW resource in the **Frozen** status.

If you do not bring your account balance current before the retention period ends, your CFW instance and protection configurations will be automatically deleted and data cannot be restored.

# 3 Billing Items

## Billing

You will be billed for service edition and expansion package (added EIP protection capacity, added peak traffic protection capacity, and added VPCs). For details, see [Table 3-1](#).

**Table 3-1** CFW billing items

| Billing Item     |  | Description   | Billing Mode                             | Formula   |
|------------------|--|---|--|---|
| Edition          |  | Different editions provide different functions.   | Yearly/<br>Monthly<br>and<br>pay-per-use | <ul style="list-style-type: none"> <li>Yearly/Monthly: Service edition x Required duration</li> <li>Pay-per-use: Service edition x Required duration</li> </ul> |
| Extended package | Protected EIPs at Internet boundary          | If the number of EIPs in the package cannot meet your protection requirements, you can purchase an expansion package. | Yearly/<br>Monthly                       | Unit price of the expansion package x Number of expansion packages x Required duration  |
|                  | Peak protection traffic at Internet boundary |   |  |   |

| Billing Item |                | Description                 | Billing Mode | Formula                                |
|--------------|----------------|-----------------------------|--------------|--|
|              | Protected VPCs |                             |              |  |
| Used traffic |                | Billed by the traffic usage | Pay-per-use  | Used traffic (GB) x Unit traffic price |

If you configure advanced settings, such as Enterprise Router (ER) and Log Tank Service (LTS), you need to also pay for these services. For details, see [Table 3-2](#).

**Table 3-2** Billing items for advanced settings

| Billing Item           | Description  |
|------------------------|--|
| Enterprise Router (ER) | If you need to protect inter-VPC traffic or Direct Connect traffic, use Enterprise Router to divert traffic.<br>For details, see <a href="#">ER Pricing Details</a> .  |
| Log Tank Service (LTS) | If you need to store logs, use LTS to store logs for 1 to 365 days.<br>For details, see <a href="#">LTS Pricing Details</a> .  |
| SMN                    | Configure the notification receiving mode (such as email or SMS) for Simple Message Notification (SMN) service so that you can receive alarm notifications in a timely manner.<br>For details, see <a href="#">SMN Pricing Details</a> . |

## Billing Examples

Suppose you purchased a one-month CFW subscription on June 30, 2023, 15:50:04 (edition: professional; extended package: one added EIP, 5 Mbit/s peak protection traffic, and one added VPC). Billing resources include the professional edition and extended package (added EIPs, added peak traffic protection capacity, and added VPCs). Your subscription is one month and you manually renew the subscription for another month before the subscription expires. The billing details are as follows:

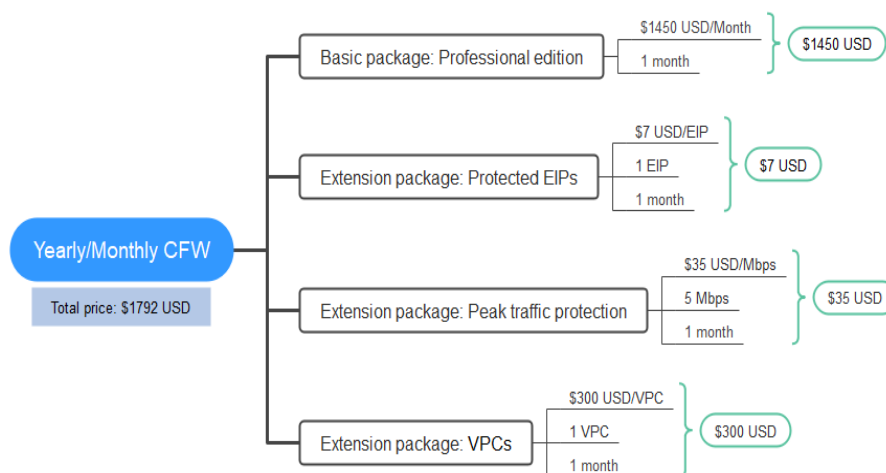
- The first billing period is from 15:50:04 on June 30, 2023 to 23:59:59 on July 30, 2023.
- The second billing period is from 23:59:59 on July 30, 2023 to 23:59:59 on Aug. 30, 2023.

[Figure 3-1](#) shows how the total price is calculated.

**NOTICE**

The prices in the figure are only for reference. For details, see [CFW Pricing Details](#).

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



For pay-per-use billing examples, see [#d0e1069](#).



# 4 Billing Examples

## Billing Scenario

A user purchased a CFW instance for one month at 15:30:00 on June 8, 2023. The configuration is as follows:

- Edition: Standard
- Protected EIPs at Internet boundary: 1
- Peak protection traffic at Internet boundary: 5 Mbit/s

After a period of time, the user finds that the current CFW specifications no longer met service requirements and updated the specifications at 9:00:00 on June 18, 2023. The configuration after the upgrade is as follows:

- Edition: Professional
- Protected EIPs at Internet boundary: 1
- Peak protection traffic at Internet boundary: 5 Mbit/s

So, how much is the fee from June to July? Let's start from scratch.

## Billing Analysis

- Edition

In this case, you need to pay the difference in price. The price of the standard edition of the original configuration is \$420 USD/month. The price of the professional edition of the new configuration is \$1750 USD/month. The price difference will be calculated as follows:

**Specification upgrade fee = New specification price × Remaining period - Old specification price × Remaining period**

The remaining period is the remaining days of each calendar month divided by the maximum number of days in each calendar month. In this example, Remaining period = 12 (Remaining days in June)/30 (Maximum number of days in June) + 8 (Remaining days in July)/31 (Maximum number of days in July) = 0.6581. Cost of upgrade = 1750.00 × 0.6581 - 420.00 × 0.6581 = \$875.273 USD.

From June to July, the cost generated for the service edition is \$875.273 USD.

- Extended package

The billing of the expansion package is irrelevant to the service edition. It is related only to the configured quota and required duration. Therefore, the billing of the value-added package remains unchanged after the edition is upgraded.

From June to July, the cost for the expansion package is  $7 + 35 = \$42$  USD

From June to July, the total cost of CFW is  $875.273 + 42 = 917.273$  USD.

# 5 Billing Mode Changes

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Currently, the billing mode of CFW cannot be changed.

# 6 Renewing Subscriptions

## 6.1 Overview

### When to Renew Subscriptions

If a yearly/monthly CFW instance is about to expire but you want to continue using it, you need to renew the CFW subscription within a specified period, or resources, such as protection rules and logs, will be automatically released, and data will be lost and cannot be restored.

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

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

### How to Renew Subscriptions

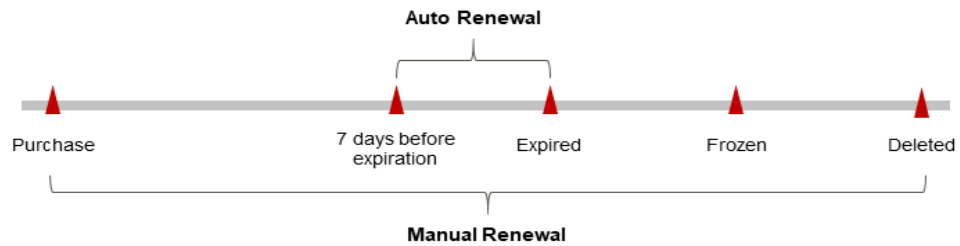
You can renew a yearly/monthly instance manually or automatically.

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

| Method                                | Description  |
|---------------------------------------|--|
| <a href="#">Manually Renewing CFW</a> | You can renew your yearly/monthly CFW instance on the console any time before it is automatically deleted.   |
| <a href="#">Auto-renewing CFW</a>     | You can enable auto-renewal to automatically renew the CFW before it expires. This prevents resources from being deleted in case you forget to renew a subscription. |

You can select a method to renew your yearly/monthly CFW instance based on the phase the CFW is currently in. For details, see [Figure 6-1](#).

Figure 6-1 CFW lifecycle



- A CFW instance is in the **Running** state after it is provisioned
- If your yearly/monthly CFW instance expires and is not renewed, after it expires, it changes to the **Expired** state and enters a grace period. During the grace period, you can access CFW. If you do not renew the CFW instance within the grace period, the resource enters the retention period and the resource status changes to **Frozen**.
- If you do not renew the subscription before the retention period expires, your resources will be automatically deleted and data cannot be restored.

 **NOTE**

Huawei Cloud offers a 15-day grace period and a 15-day retention period.


You can enable auto-renewal any time before your CFW 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. You can change the auto-payment date for renewal as required.


## 6.2 Manually Renewing CFW

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

### Renewing a CFW Instance on the Console

**Step 1** [Log in to the management console.](#)

**Step 2** Click  in the upper left corner of the management console and select a region or project.

**Step 3** In the navigation pane on the left, click  and choose **Security & Compliance > Cloud Firewall**. The **Dashboard** page will be displayed.

**Step 4** (Optional) Switch firewall instance: Select a firewall from the drop-down list in the upper left corner of the page.

**Step 5** In the upper right corner, click **Renew**.

- Step 6** Select a renewal duration and optionally select **Renewal Date**. For details, see [Setting the Same Renewal Day for Yearly/Monthly Resources](#). Confirm the price and click **Pay**.
- Step 7** Select a payment method and make your payment. Once the order is paid for, the renewal is complete.
- End

## Renewing a Subscription in Billing Center

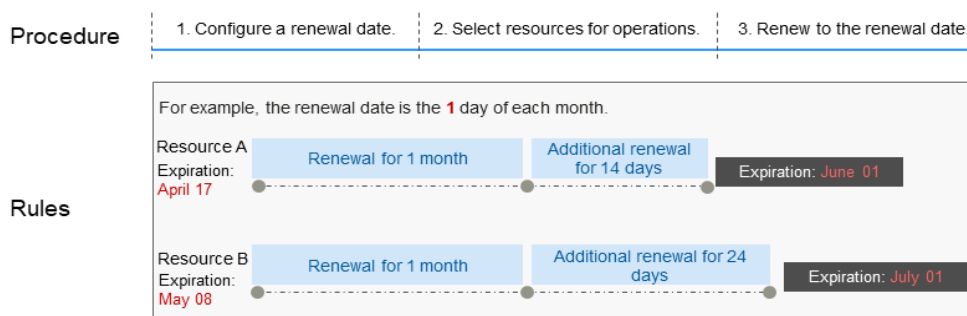
- Step 1** [Log in to the management console](#).
- Step 2** In the upper right corner of the page, choose **Billing > Renewal**. The **Renewals** page is displayed.
- Step 3** Manually renew resources.
- Individual renewal: Click **Renew** in the **Operation** column for the desired resource.
  - Batch renewal: Check the boxes for the desired resources, and click **Batch Renew** in the upper left corner.
- Step 4** Select a renewal duration and optionally select **Renewal Date**. For details, see [Setting the Same Renewal Day for Yearly/Monthly Resources](#). Confirm the price and click **Pay**.
- Step 5** Select a payment method and make your payment. Once the order is paid for, the renewal is complete.
- End

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

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

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

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



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

## 6.3 Auto-renewing CFW

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

- The first auto-renewal date is based on when the CFW instance expires and the billing cycle.
- The auto-renewal period of a CFW instance depends on the subscription term you selected. For example, if the subscription term is 3 months, your subscription is automatically renewed for three months every time before expiration.
- You can enable auto-renewal any time before your CFW 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 manually renew your CFW instances. 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 system automatically deducts fees from your account 7 days before your instance expires. You can change the renewal payment date if needed, for example, 6 days or 5 days before the instance expires.

For details, see [Auto-Renewal Rules](#).

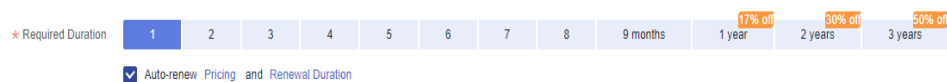
### Prerequisites

The yearly/monthly CFW instance is not expired.

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

You can enable auto-renewal on the CFW purchase page, as shown in [Figure 6-3](#). For details, see [Purchasing CFW](#).

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



### Enabling Auto-Renewal on the Renewals Page

**Step 1** [Log in to the management console](#).

**Step 2** In the upper right corner of the page, choose **Billing > Renewal**. The **Renewals** page is displayed.

**Step 3** Select the search criteria.

- On the **Auto Renewals** page, you can view the resources for which auto-renewal has been enabled.

- You can enable auto-renewal for resources on the **Manual Renewals** and **Renewals Canceled** tab pages.

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

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

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

----End



# 7 Bills

You can view the resource usage and bills for a different billing cycles on the **Bills** page in the Billing Center.


## Bill Generation


- Transaction records for yearly/monthly subscriptions are generated immediately after being paid for.
- The usage of pay-per-use resources is reported to the billing system at a fixed interval. A pay-per-use resource is billed by the hour, day, or month, depending on the resource's usage type. The CFW usage is billed by the hour. You are not charged immediately after a record is generated. For example, if a pay-per-use CFW (which is billed on an hourly basis) is deleted at 08:30, you will still have expenditures for the 08:00 to 09:00 hour. However, you will not likely be billed for the 08:00 to 09:00 hour until about 10:00.

On the **Billing Center > Billing > Transactions and Detailed Bills > Transaction Bills** page, **Expenditure Time** lists the usage duration of your pay-per-use resources.

## Viewing Bills of a Specific Resource

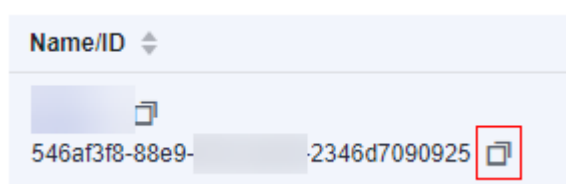
**Step 1** [Log in to the management console.](#)

**Step 2** Click  in the upper left corner of the management console and select a region or project.


**Step 3** In the navigation pane on the left, click  and choose **Security & Compliance > Cloud Firewall**. The **Dashboard** page will be displayed.

**Step 4** Click the icon shown in the figure below to copy the instance ID.

**Figure 7-1** Copying the resource ID



**Step 5** On the top menu bar, choose **Billing > Bills**. The **Bills** page is displayed.

**Step 6** Choose **Transactions and Detailed Bills > Bill Details**. On the displayed page, select **Resource ID** as the filter condition, paste the resource ID copied before, and click  to search for the bill of the resource.

By default, bill details are displayed by usage and billing cycle. You can also select other statistical dimensions or periods.

----End

# 8 Arrears

If your configured payment method is unable to pay for your bill, your account will be in arrears. You need to update your payment method or to top up your account in a timely manner if you want to continue using your cloud services.

## Arrears Impact

- Yearly/Monthly

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

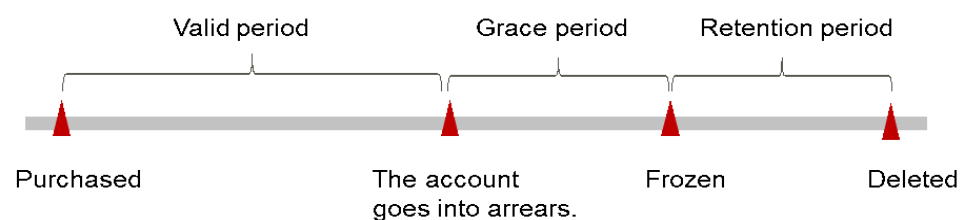
- Pay-per-Use

Your account may fall into arrears if it cannot cover the bill you need to pay. In this case, relevant cloud services will not be stopped immediately. There will be a grace period for pay-per-use resources. After you top up your account, Huawei Cloud will bill you for expenditures generated by the resources during the grace period. You can view the expenditures on the **Overview** page of the Billing Center.

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

After the retention period ends, the CFW instances and protection configurations will be released and cannot be restored.

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



## Avoiding and Handling Arrears

Make sure you have a valid payment method configured as soon as possible after your account is in arrears.

On the top menu bar of the console, choose **Billing > Bills** to go to the **Billing Center** page. To help make sure your account never falls into arrears, you can configure the **Balance Alert** on the **Overview** page of the Billing Center. Then, 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, top up your account in a timely manner.

# 9 Billing Termination

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## Yearly/Monthly Resources

When you purchase a yearly/monthly resource, such as a yearly/monthly CFW instance, you make a one-time up-front payment. By default, the billing automatically stops when the purchased 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 the purchase. For details about unsubscription rules, see [Unsubscriptions](#).
- If you have enabled auto-renewal but no longer wish to automatically renew the subscription, disable it before the auto-renewal date (7 days before the expiration date by default) to avoid unexpected expenditures.
- For details about how to unsubscribe from CFW resources, see [How Do I Unsubscribe from CFW?](#)

## Pay-per-Use Resources

For resources billed on a pay-per-use basis, such as the pay-per-use CFW instances, you need to unsubscribe from them if you no longer need them. The billing stops once you complete the unsubscription.

### NOTE

The system usually deducts fees of the last settlement period within one hour after the products are used. As a result, after a pay-per-use resource is deleted, the bill information may still exist. For example, if you release a CFW (which is billed on an hourly basis) at 08:30, the expenditures for the hour from 08:00 to 09:00 are usually not billed until about 10:00.

# 10 Cost Management

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As you migrate more of your services to the cloud, managing cloud costs becomes more important. For example, you may be more concerned with cost management when using CFW. The following describes how to manage costs in terms of cost composition, allocation, analysis, and optimization. Optimizing costs can help you maximize return on investment.

## Cost Composition

CFW costs consist of two parts: resources and resource packages. For details about CFW billing items, see [Billing Items](#).

## Cost Allocation

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

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

- **By linked account**

The enterprise master account can manage costs by grouping the costs of its member accounts by linked account. For details, see [Viewing Costs by Linked Account](#).

- **By enterprise project**

Before allocating costs, enable Enterprise Project Management Service (EPS) and plan your enterprise projects based on your organizational structure or service needs. When purchasing cloud resources, select an enterprise project so that the costs of the resources will be allocated to the selected enterprise project. For details, see [Viewing Costs by Enterprise Project](#).

**Figure 10-1** Selecting an enterprise project

\* Enterprise Project

[Create Enterprise Project](#)

- **By cost tag**

Huawei Cloud assigns tags to your cloud resources so they can be sorted in different ways, for example, by purpose, owner, or environment. The following is the process of managing costs by predefined tags (recommended).

  - a. **Add a predefined tag.**

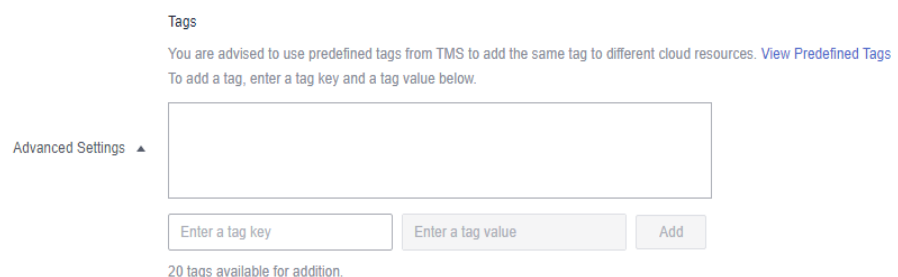
Go to the TMS console and create predefined tags. For details, see [Creating Predefined Tags](#).
  - b. **Activate cost tags.**

For details, see [Activating Cost Tags](#). You can view activated cost tags on the **Cost Analysis** or **Budgets** page.

If you activate some tags, they will be used to organize your resource costs generated thereafter. If you want to use tags to analyze the cost data generated before tag activation, export the bill details file and analyze the data based on the **Resource Tag** field in the file.
  - c. **Add tags to CFW resources.**

On the page for purchasing a CFW instance, you can select a created predefined tag.

**Figure 10-2** Adding a tag



- d. **View cost data by the cost tag.**

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

For details, see [Creating Predefined Tags](#).
- **Allocate costs by cost category.**

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

## Cost Analysis

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

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

For details, see [Performing Cost Analysis to Explore Costs and Usage](#) and [Enabling Cost Anomaly Detection to Identify Anomalies](#).

## Cost Optimization

- **Cost control**

You can create different types of budgets on the **Budgets** page of Cost Center to track your costs against the budgeted amount you specified and send alerts to the recipients you configured if the thresholds you defined are reached. You can also create budget reports and specify recipients to receive budget alerts if any at a frequency you configured.

Suppose you want to create a monthly budget of \$2000 USD for CFW resources and expect to receive an alert if the forecasted amount exceeds 80% of the budgeted amount. You can refer to the following budget information.

**Figure 10-3** Basic budget information

**Budget Details**

- \* Budget Name: CFW
- \* Reset Period: Daily, **Monthly**, Quarterly, Yearly. Budget evaluation begins at 00:00 GMT+08:00 on the 1st day of the start month and will be reset to zero at 00:00 GMT+08:00 on the 1st day of each month moving forward.
- \* Budget Duration: **Recurring**, Expiring
- \* Start Time: 2023/09
- \* Allocation: **Fixed**, Monthly, Dynamic
- \* Budgeted Amount (USD): 2000. Last month's cost: \$3,217.80 USD



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

|                        |         |   |
|------------------------|---------|---|
| Service Type           | Include | ▲ |
| Cloud Firewall (CFW) ✕ |         | 1 |
| Linked Account         | All     | ▼ |
| Region                 | All     | ▼ |
| Specifications         | All     | ▼ |
| Usage Type             | All     | ▼ |
| Cost Tag               | All     | ▼ |
| Cost Categories        | All     | ▼ |
| Enterprise Project     | All     | ▼ |
| Business Entity        | All     | ▲ |
| Bill Type              | All     | ▼ |
| Billing Mode           | Include | ▲ |
| Yearly/Monthly ✕       |         | 1 |
| AZ                     | All     | ▼ |

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

Thresholds    Alerts are sent when the forecast cost is higher than 80%(\$1,600.00)

[Add threshold](#)

Recipients [Select From Contacts](#)

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

- **Resource rightsizing**

The cost center can monitor the historical usage of CFW resources and provide customers with idle CFW resources identification and optimization suggestions to find cost saving opportunities. You can also identify resources with high costs based on the analysis results in the [Cost Analysis](#) phase and use Cloud Eye to monitor resource usage. By doing this, you can determine the causes of high costs and take optimization measures accordingly.

## Related Operations

**Creating a Budget:** You can create budget reminders based on daily, monthly, quarterly, and yearly costs and resource usage. If your actual costs or usage exceeds the budget threshold you configured, you will receive an alert.

# 11 Billing FAQs

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## 11.1 How Is VPC Border (East-West) Traffic Charged?

By default, the CFW professional edition protects two VPCs, providing 200 Mbit/s protection for VPC border traffic. To protect more inter-VPC traffic, you can purchase more VPC protection quotas. Each quota provides 200 Mbit/s protection for VPC border traffic.

For example, CFW protects two VPCs (200 Mbit/s in total) by default. To protect 1 Gbit/s VPC border traffic, you need to purchase four more quotas (4 x 200 Mbit/s). The VPC border protection traffic = Default protection traffic (200 Mbit/s) + 4 x VPC protection quotas (200 Mbit/s) = 1 Gbit/s.

## 11.2 How Is CFW Billed?

CFW can be billed in yearly/monthly (prepaid) or pay-per-use mode. For details, see [Pricing](#).

In the standard edition, you can increase the number of protected EIPs and peak Internet border traffic.

In the professional edition, you can increase the number of protected EIPs, peak Internet border traffic, and the number of protected VPCs.



- For details about CFW billing mode, see [Billing](#).
- For more information, see [Editions](#).

## 11.3 How Do I Change My CFW Edition?

The CFW standard edition can be upgraded to the professional edition, but the professional edition cannot be changed to the standard edition. To change to a lower edition, unsubscribe from the current edition and purchase the required one.

For details about unsubscription, see [How Do I Unsubscribe from CFW?](#)

## Upgrading the Standard Edition to the Professional Edition

- Step 1** [Log in to the management console.](#)
- Step 2** Click  in the upper left corner of the management console and select a region or project.
- Step 3** In the navigation pane on the left, click  and choose **Security & Compliance > Cloud Firewall**. The **Dashboard** page will be displayed.
- Step 4** (Optional) Switch firewall instance: Select a firewall from the drop-down list in the upper left corner of the page.
- Step 5** In the upper left corner of the page, click **Upgrade to Professional Edition**. The CFW purchase page is displayed.
- Step 6** Confirm the edition specifications and click **Buy Now**.
- Step 7** Confirm the order details, select **I have read and agreed to the Huawei Cloud Firewall Service Statement**, and click **Next**.
- Step 8** Select a payment method and pay for your order.

----End

## 11.4 Can I Switch Between Yearly/Monthly and Pay-per-Use Payments for CFW?

No. Yearly/Monthly packages and pay-per-use subscriptions cannot be changed to each other.

You are advised to unsubscribe from CFW and purchase it again. For details, see [How Do I Unsubscribe from CFW?](#)

## 11.5 How Do I Renew CFW?

This section describes how to renew CFW when it is about to expire. After the renewal, you can continue to use CFW.

- Before your CFW subscription expires, the system will send an SMS message or email to remind you to renew it.
- After your CFW expires, there is a retention period for you.



This period varies depending on account. For details, see [Retention Period](#).

### NOTE

To avoid unnecessary loss caused by security issues, renew your subscription before the retention period expires.

### Procedure

- Step 1** [Log in to the management console.](#)



- Step 2** Click  in the upper left corner of the management console and select a region or project.
- Step 3** In the navigation pane on the left, click  and choose **Security & Compliance > Cloud Firewall**. The **Dashboard** page will be displayed.
- Step 4** In the upper right corner, click **Renew**.
- Step 5** On the renewal management page, complete the renewal.  
For details, see [Renewal Rules](#).
- End

## 11.6 How Do I Unsubscribe from CFW?

This section describes how to unsubscribe from CFW billed in yearly/monthly mode.



The original CFW configurations will be deleted after unsubscription and cannot be restored. You are advised to export protection policies before unsubscription, and import them after you purchase another CFW instance. For details, see [Managing Protection Rules in Batches](#).

### Procedure (for Yearly/Monthly Firewalls)

- Step 1** [Log in to the management console](#).
- Step 2** Click  in the upper left corner of the management console and select a region or project.
- Step 3** In the navigation pane on the left, click  and choose **Security & Compliance > Cloud Firewall**. The **Dashboard** page will be displayed.
- Step 4** (Optional) Switch firewall instance: Select a firewall from the drop-down list in the upper left corner of the page.
- Step 5** Hover your cursor over the edition name in the upper left corner of the page. Click **Unsubscribe**.
- Step 6** Confirm the resource to be unsubscribed from and click **OK**.
- Step 7** After confirming that the information is correct, select **I understand that a handling fee will be charged for this unsubscription**.
- Step 8** Click **Next** and complete the subsequent operations.
- End

### Procedure (for Pay-per-Use Firewalls)

- Step 1** [Log in to the management console](#).

- Step 2** Click  in the upper left corner of the management console and select a region or project.
- Step 3** In the navigation pane on the left, click  and choose **Security & Compliance > Cloud Firewall**. The **Dashboard** page will be displayed.
- Step 4** (Optional) Switch firewall instance: Select a firewall from the drop-down list in the upper left corner of the page.
- Step 5** Hover your cursor over the edition name in the upper left corner of the page. Click **Delete**.
- Step 6** Confirm the resource to be unsubscribed from, enter **DELETE**, and click **OK**.
- End