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## Document conventions

<table>
<thead>
<tr>
<th>Style</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Danger" /></td>
<td>A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.</td>
<td>Danger: Resetting will result in the loss of user configuration data.</td>
</tr>
<tr>
<td><img src="image" alt="Warning" /></td>
<td>A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.</td>
<td>Warning: Restarting will cause business interruption. About 10 minutes are required to restart an instance.</td>
</tr>
<tr>
<td><img src="image" alt="Notice" /></td>
<td>A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.</td>
<td>Notice: If the weight is set to 0, the server no longer receives new requests.</td>
</tr>
<tr>
<td><img src="image" alt="Note" /></td>
<td>A note indicates supplemental instructions, best practices, tips, and other content.</td>
<td>Note: You can use Ctrl + A to select all files.</td>
</tr>
<tr>
<td>&gt;</td>
<td>Closing angle brackets are used to indicate a multi-level menu cascade.</td>
<td>Click Settings &gt; Network &gt; Set network type.</td>
</tr>
<tr>
<td><strong>Bold</strong></td>
<td>Bold formatting is used for buttons, menus, page names, and other UI elements.</td>
<td>Click OK.</td>
</tr>
<tr>
<td>Courier font</td>
<td>Courier font is used for commands.</td>
<td>Run the cd /d C:/window command to enter the Windows system folder.</td>
</tr>
<tr>
<td><em>Italic</em></td>
<td>Italic formatting is used for parameters and variables.</td>
<td>bae log list --instanceid Instance_ID</td>
</tr>
<tr>
<td>[] or [a</td>
<td>b]</td>
<td>This format is used for an optional value, where only one item can be selected.</td>
</tr>
<tr>
<td>Style</td>
<td>Description</td>
<td>Example</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------------------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>{} or {a</td>
<td>b}</td>
<td>This format is used for a required value, where only one item can be selected.</td>
</tr>
</tbody>
</table>
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1 Billing overview

This topic describes items related to ECS billing, including billable resources, billing methods, and payment methods.

Resource pricing

For more information about ECS resource prices, see Pricing.

Note:
The price of an ECS resource may vary depending on regions.

Billable resources

ECS comprises the following major components: instances, images, block storage devices, snapshots, security groups, and networks. For more information, see ECS architecture.

The following table describes billable ECS resources.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECS instances</td>
<td>You are billed based on the instance type you choose. The instance type determines the number of vCPUs and the size of memory you can use.</td>
</tr>
<tr>
<td>Resource</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td>Images</td>
<td>Images are classified into four types:</td>
</tr>
<tr>
<td></td>
<td>• Public images</td>
</tr>
<tr>
<td></td>
<td>- Windows Server images: The price is subject to the instance type you choose. For more information, see the purchase page.</td>
</tr>
<tr>
<td></td>
<td>- Red Hat images: These images incur fees. For more information, see the purchase page.</td>
</tr>
<tr>
<td></td>
<td>- Other public images are free of charge.</td>
</tr>
<tr>
<td></td>
<td>• Marketplace images: The price is subject to the pricing standards of image providers. For information about how to use Marketplace images, see #unique_5.</td>
</tr>
<tr>
<td></td>
<td>• Custom images</td>
</tr>
<tr>
<td></td>
<td>- If a custom image is obtained from a free public image or a free Marketplace image, the image fee is the fee incurred by the snapshot used to create the custom image. Snapshots are charged based on storage space usage.</td>
</tr>
<tr>
<td></td>
<td>- If a custom image is obtained from a paid public image or a paid Marketplace image, the image fee is the fee incurred by the snapshot used to create the custom image. Snapshots are charged based on storage space usage. If you use a custom image to create an ECS instance, you are also charged for the image.</td>
</tr>
<tr>
<td></td>
<td>• Shared images</td>
</tr>
<tr>
<td></td>
<td>- If a shared image is obtained from a free public image or a free Marketplace image, it is free of charge.</td>
</tr>
<tr>
<td></td>
<td>- If a shared image is obtained from a paid public image or a paid Marketplace image, you are also charged for the image if you use it to create an ECS instance.</td>
</tr>
<tr>
<td>Resource</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| Block storage | Alibaba Cloud provides the following types of block storage devices:  
  • Cloud disks  
    Cloud disks are billed based on their storage capacity. You can use cloud disks as system disks or data disks.  
  • Local disks  
    Local disks are billed based on their storage capacity. You can use local disks only as data disks. You cannot purchase a separate local disk. Local disks created together with an ECS instance have the same billing method as the ECS instance.  
    Instance families that are equipped with local disks include but are not limited to d1ne, d1, i2, i2g, i1, gn5, and ga1. For information about instance families, see #unique_6.  
  • Shared Block Storage  
    Shared Block Storage is under free invitational review and can only be used as data disks. |
Resource | Description
--- | ---
Internet bandwidth | An ECS instance can access the Internet by using the following methods:
  - Public IP address
    - Fixed public IP address allocated by the system
    If your instance accesses the Internet by using a fixed public IP address, the charges are as follows:
    - Retained IP addresses: Retained fixed public IP addresses do not incur fees. You are only charged for Internet bandwidth.
    - Internet bandwidth:
      - Pay-By-Bandwidth. Fees are charged by the bandwidth you specify.
      - Pay-By-Traffic. Fees are charged by the traffic you actually used.
  - Elastic IP Address (EIP)
    EIP is an independent service. For more information, see Billing of EIP. You can only associate EIPs with VPC-type ECS instances.
  - NAT Gateway
    NAT Gateway is an independent service. For more information, see Billing of NAT Gateway.
Snapshots | Snapshots are billed based on the storage space usage.

**Billing methods**

ECS instances support two billing methods: subscription and pay-as-you-go.

- Subscription: A prepaid method that allows you to use an instance only after you pay for it. Subscription is suitable the services that run for 24 hours a day and 7 days a week, such as Web services. For more information, see Subscription.
- Pay-as-you-go: A postpaid method in which you can pay after using the resource. Pay-as-you-go is suitable for scenarios where traffic spikes occur, such as temporary scaling, interim testing, and scientific computing. For more information, see Pay-as-you-go.
For the difference between subscription and pay-as-you-go, see Billing method comparison.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Billing method</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECS instances</td>
<td>• Subscription</td>
</tr>
<tr>
<td></td>
<td>• Pay-as-you-go</td>
</tr>
<tr>
<td></td>
<td>If you plan to make a long-term commitment with pay-as-you-go ECS instances, you can purchase reserved instances to offset your bill. This method is more flexible and cost-effective. For more information, see #unique_12. For the billing details of reserved instances, see Reserved instance billing.</td>
</tr>
<tr>
<td></td>
<td>• Preemptible instances</td>
</tr>
<tr>
<td></td>
<td>Preemptible instances are a type of on-demand instances that reduce overall ECS instance costs. Preemptible instances may be reclaimed. You can use auto provisioning groups to alleviate the instability caused by reclaiming preemptible instances. For more information, see #unique_14.</td>
</tr>
<tr>
<td>Images</td>
<td>• Subscription</td>
</tr>
<tr>
<td></td>
<td>• Pay-as-you-go</td>
</tr>
<tr>
<td></td>
<td>Images can only be used with ECS instances. Windows-based reserved instances can be used to offset image bills.</td>
</tr>
<tr>
<td>Resource</td>
<td>Billing method</td>
</tr>
<tr>
<td>------------</td>
<td>----------------</td>
</tr>
</tbody>
</table>
| Cloud disks | • Subscription  
              • Pay-as-you-go |
| Internet bandwidth | If your ECS instance accesses the Internet by using a fixed public IP address, the billing methods are as follows:  
|                  | • Pay-By-Bandwidth  
|                  |   Fees are charged based on the bandwidth you specify. The following billing methods are supported:  
|                  |   - Subscription  
|                  |   - Pay-as-you-go  
|                  | • Pay-By-Traffic  
|                  |   You are billed based on the traffic you actually used on an hourly basis.  
| Snapshots       | Pay-as-you-go.  
|                | For more information, see **Snapshot billing methods**. |
Payment methods

You can use the following methods to pay for ECS resources.

- Bank card
- PayPal

  Alibaba Cloud will make pre-authorization hold to your PayPal account after your pay-as-you-go resources start incurring fees.

- Paytm (India)

  Only for users in India. Alibaba Cloud will make pre-authorization hold to your Paytm account after your pay-as-you-go resources start incurring fees.

Note:

Coupons are used to offset your billing invoice before the bill is issued. It is not involved in the actual payment process.

Before purchasing ECS resources, you must bind a bank card, PayPal account, or Paytm (India) account to your Alibaba account. For more information, see Add a payment method in Account management.

To purchase ECS resources in mainland China, you must complete real-name verification. For more information, see "How can I complete real-name verification?" in Real-name verification FAQs of Account management.
## 2 Billing method comparison

This topic compares the features and billing rules of subscription and pay-as-you-go instances.

### Feature comparison

Subscription ECS instances and pay-as-you-go ECS instances support different features. The following table lists the differences. For more information about the two billing methods, see Subscription and Pay-as-you-go.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Subscription</th>
<th>Pay-as-you-go</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renew</td>
<td>Supported.</td>
<td>Not supported.</td>
</tr>
<tr>
<td></td>
<td>For more information, see Renewal overview.</td>
<td></td>
</tr>
<tr>
<td>Release an instance at any time</td>
<td>Not supported.</td>
<td>Supported.</td>
</tr>
<tr>
<td></td>
<td>After an ECS instance expires, it is automatically released if it is not renewed within the specified period of time.</td>
<td>Release pay-as-you-go ECS instances that you no longer use as soon as possible. If you do not release them, the ECS resources are continuously charged until the instances are stopped and released due to overdue payments. For more information, see #unique_19.</td>
</tr>
<tr>
<td>Change instance types</td>
<td>Supported.</td>
<td>Supported.</td>
</tr>
<tr>
<td></td>
<td>For more information, see #unique_20 and #unique_21.</td>
<td>For more information, see #unique_22.</td>
</tr>
<tr>
<td>Change bandwidth configuration</td>
<td>Supported.</td>
<td>Supported.</td>
</tr>
<tr>
<td></td>
<td>For more information, see #unique_20 and Downgrade an instance during renewal.</td>
<td>For more information, see #unique_24.</td>
</tr>
</tbody>
</table>
### Feature Comparison Table

<table>
<thead>
<tr>
<th>Feature</th>
<th>Subscription</th>
<th>Pay-as-you-go</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change billing methods</td>
<td>Supported. For more information, see Switch the billing method from Subscription to Pay-As-You-Go and #unique_20.</td>
<td>Supported. For more information, see Switch the billing method from Pay-As-You-Go to Subscription.</td>
</tr>
<tr>
<td>Use a subscription image from Alibaba Cloud Marketplace</td>
<td>Supported. For more information, see the &quot;FAQ about subscription Alibaba Cloud Marketplace images&quot; section in Image FAQ.</td>
<td>Not supported.</td>
</tr>
<tr>
<td>Apply for ICP filing for websites that are deployed on ECS instances in mainland China</td>
<td>Supported. Only ECS instances that have a subscription period of at least three months can be used for ICP filing. For more information about ICP filing, see #unique_28.</td>
<td>Not supported.</td>
</tr>
<tr>
<td>Created by calling API operations</td>
<td>Supported. Payment by bank cards or PayPal is not supported.</td>
<td>Supported.</td>
</tr>
<tr>
<td>Use Alibaba Cloud Security, CloudMonitor, and SLB for free</td>
<td>Supported.</td>
<td>Supported.</td>
</tr>
</tbody>
</table>

### Billing rule comparison

Billing rules for subscription ECS resources and pay-as-you-go ECS resources have the following differences:

- Subscription resources can be used only after payment is made. You need to pay the bill of subscription resources to use them. For more information about the billing rules, see Subscription.
• You can activate and use pay-as-you-go resources before you pay for them. The system generates a bill in each settlement cycle and deducts the corresponding fee from your account. For more information about the billing rules, see Pay-as-you-go.

To view the payment records of ECS resources, log on to ECS console. In the top navigation bar, choose Billing Management > Billing Management, and then go to the Income/Expense page to view the payment records for a specified month.

![Bill Details]

<table>
<thead>
<tr>
<th>Paid</th>
<th>Unpaid</th>
<th>To be Billed</th>
<th>Refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month (Updated: Aug 17, 2019, 13:00:00)</td>
<td>Billing Method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug 2019</td>
<td>All</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- All
- Subscription
- Pay-As-You-Go
3 Subscription

This topic describes the billing rules for subscription ECS resources. Subscription is a billing method that allows you to use resources only after payment for them is received. With subscription, you can reserve resources in advance and reduce your costs with the discounted rates.

Overview

Before using subscription resources, you must create a subscription ECS instance. The following figure shows subscription durations you can choose for your ECS instance.

<table>
<thead>
<tr>
<th>Duration</th>
<th>1 Month</th>
<th>2 Months</th>
<th>3 Months</th>
<th>6 Months</th>
<th>1 Year</th>
</tr>
</thead>
</table>

During instance creation, resources are charged separately to generate the total price. You can use subscription resources only after you pay the total price. For information about how prices are calculated, see Billing.

After creating a subscription instance, you can change its specifications or resize subscription cloud disks attached to it. For more information, see #unique_29 and #unique_30.

After a billing cycle expires, you can renew your ECS instance to continue using the resources. For more information, see Renewal overview.

Applicable resources

Currently, subscription-based billing is available for the following ECS resources:

- ECS instances
- Images
- Disks
- Internet bandwidth (Pay-By-Bandwidth)

In addition to the instance type, you must also configure the block storage, image, and network type when you create an instance. The images and cloud disks created along with the subscription ECS instance also use subscription-based billing. However, you can select the billing method for network usage.

Note:
After creating a subscription ECS instance, you can create subscription cloud disks for the instance or attach separately created pay-as-you-go cloud disks to it. For more information, see #unique_31 and #unique_32.

You can view the total price of the preceding resources in the lower left part of the instance creation page.

In the preceding figure,

- **Total** price is the price of the following resources:
  - ECS instances
  - Disks
  - Internet bandwidth (Pay-By-Bandwidth)

**Note:**
If you select Pay-By-Traffic as the billing method for network usage, the total price does not include the price for Internet bandwidth. For more information, see Billing methods of public bandwidth.

- **Image Fees** indicates that you selected a paid image when creating the instance.

You can use the ECS TCO Calculator to quickly analyze your cloud migration costs.

**Billing**

The billing cycle is the time commitment you made when you purchased the subscription instance (based on UTC+8:00). The cycle starts from the time when the purchased subscription resources are activated or renewed (accurate to seconds) and ends at 00:00:00 the next day after the expiration date.

For example, you created a subscription ECS instance at 13:00:00 on August 9, 2019. Related resources include the ECS instance, image, and cloud disk (system disk). You select a subscription duration of one month and manually renew the instance with another one-month commitment. The billing cycles are as follows:

- The first billing cycle is from 13:00:00 on August 9, 2019 to 00:00:00 on September 10, 2019.
- The second billing cycle is from 00:00:00 on September 10, 2019 to 00:00:00 on October 10, 2019.
ECS resources are charged separately. You must pay these fees before you can use the resources. You can calculate the total price based on the configurations you choose. The following table provides the formulas used to calculate the fee of each ECS resource.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Formula</th>
<th>Unit price</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECS instances</td>
<td>Unit price of an instance type × Subscription duration</td>
<td>For more information, see <a href="#">Instance Fee</a> on <a href="#">ECS Pricing</a>.</td>
</tr>
<tr>
<td>Images</td>
<td>Image unit price × Subscription duration</td>
<td>You can view the price on the purchase page and in the Alibaba image marketplace.</td>
</tr>
<tr>
<td>Cloud disks (system disks)</td>
<td>Disk unit price × Disk capacity × Subscription duration</td>
<td>For more information, see <a href="#">Storage Fee &gt; System Disk</a> on <a href="#">ECS Pricing</a>.</td>
</tr>
<tr>
<td>Cloud disks (data disks)</td>
<td>Disk unit price × Disk capacity × Subscription duration</td>
<td>For more information, see <a href="#">Storage Fee &gt; Data Disk</a> on <a href="#">ECS Pricing</a>.</td>
</tr>
</tbody>
</table>

**Note:**
- Local disks attached to an instance are billed together with the instance.
- The price for a pay-as-you-go disk on the page is USD/100 GiB/hour. Divide it by 100 to obtain the unit price per GiB.
### Elastic Compute Service

#### Pricing / 3 Subscription

<table>
<thead>
<tr>
<th>Resource</th>
<th>Formula</th>
<th>Unit price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet bandwidth (Pay-By-Bandwidth)</td>
<td>Bandwidth unit price × Bandwidth value × Subscription duration</td>
<td>Fixed bandwidth uses the tiered billing method. You can select a bandwidth value on the purchase page to view the changes in fees.</td>
</tr>
</tbody>
</table>

For more information, see [Billing methods of public bandwidth.](#)

The following figure shows the procedure for calculating the price of a subscription ECS instance that is created in China (Qingdao) with a subscription duration of three months.

**Note:**
The price is for reference only. For the exact price, visit the links provided in the preceding table.

![Subscription instance in China (Qingdao)](#)

**Changes in resource status after expiration**

**Notice:**
The system may send you notifications that your instances expire. When this occurs, please renew your instances to avoid instances being released. Please note that your instances may be released at a system-selected time after the expiration date. If you still have problems, submit a ticket.

If the auto renewal function is not enabled, the instance stops providing services at any time from 00:00:00 of the expiration date to 00:00:00 the next day.
You cannot enable auto renewal for an expired subscription ECS instance.

The following table describes the resource status after the instance expires.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Within 15 days after expiration</th>
<th>More than 15 days after expiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECS instances</td>
<td>The ECS instance is retained but it cannot be used.</td>
<td>The ECS instance is released.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> After the instance stops providing services, you cannot connect to the instance remotely, or access websites deployed on the instance. Service errors will occur.</td>
<td></td>
</tr>
<tr>
<td>Images</td>
<td>Images are unavailable.</td>
<td>Images are unavailable.</td>
</tr>
<tr>
<td>Block storage</td>
<td>• Cloud disks and data on them are retained, but the cloud disks cannot be used.</td>
<td>• Subscription disks are released and data on them cannot be restored.</td>
</tr>
<tr>
<td></td>
<td>• Local disks and data on them are retained, but the local disks cannot be used.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Share Block Storage devices and data on them are retained, but the devices cannot be used.</td>
<td><strong>Note:</strong> If you manually attach a pay-as-you-go cloud disk to the subscription instance and set the release mode to &quot;not release with instance&quot;, the pay-as-you-go cloud disk stops working.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Local disks are released and data on them cannot be restored.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Shared Block Storage devices are automatically detached.</td>
</tr>
</tbody>
</table>
If you have enabled the auto renewal function for your subscription ECS instance but the renewal fails, the instance automatically stops operating at any time from 00:00:00 on the 15th day after expiration to 00:00:00 on the 16th day after expiration.

The following table describes the resource status after the instance expires.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Within 15 days after expiration</th>
<th>More than 15 days after expiration</th>
<th>More than 30 days after expiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECS instances</td>
<td>The instance is retained and working properly.</td>
<td>The ECS instance is retained but it cannot be used.</td>
<td>The ECS instance is released.</td>
</tr>
<tr>
<td>Note: When the instance works properly, you can start or stop the instance, and connect to the instance remotely or by using the management terminal of the ECS console.</td>
<td>Note: After the instance becomes unavailable, you cannot connect to the instance remotely, or access websites deployed on the instance. Service errors will occur.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Images</td>
<td>Images are available.</td>
<td>Images are unavailable.</td>
<td>Images are unavailable.</td>
</tr>
<tr>
<td>Resource</td>
<td>Within 15 days after expiration</td>
<td>More than 15 days after expiration</td>
<td>More than 30 days after expiration</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------------------------------</td>
<td>-----------------------------------</td>
<td>----------------------------------</td>
</tr>
</tbody>
</table>
| Block storage            | • Cloud disks and data on them are retained. The cloud disks can work properly.  
|                          | • Local disks and data on them are retained. The local disks can work properly.  
|                          | • Share Block Storage devices and data on them are retained. The devices can work properly.  | • Cloud disks and data on them are retained, but the cloud disks cannot be used.  
|                          |                                 | • Local disks and data on them are retained, but the local disks cannot be used.  
|                          |                                 | • Share Block Storage devices and data on them are retained, but the devices cannot be used.  | • Subscription disks are released and data on them cannot be restored.  

**Note:**
If you manually attach a pay-as-you-go cloud disk to the subscription instance and set the release mode to "not release with instance", the pay-as-you-go cloud disk stops working.

• Local disks are released and data on them cannot be restored.
• Shared Block Storage devices are automatically detached.

| Public IP addresses     | Instances in classic networks: Fixed public IP addresses are retained.  
|                         | Instances in a VPC  
|                          | - Fixed public IP addresses are retained.  
|                          | - The EIP associated with the instance is not affected.  | Instances in classic networks: Fixed public IP addresses are retained.  
|                          | Instances in a VPC  
|                          | - Fixed public IP addresses are retained.  
|                          | - The EIP associated with the instance is not affected.  | Instances in classic networks: Fixed public IP addresses are released.  
|                          | Instances in a VPC  
|                          | - Fixed public IP addresses are released.  
|                          | - The EIP is disassociated from the instance.  |
This topic describes the billing and settlement rules for pay-as-you-go ECS resources. Pay-as-you-go allows you to pay for the amount of resources you actually use. You can purchase and release resources on demand, and scale up as your business grows. Pay-as-you-go helps reduce your costs by 30% to 80% compared with the investment of a traditional host.

Overview

Pay-as-you-go resources are billed based on the billing cycle and paid each hour. If you have a quota agreement with Alibaba Cloud, fees are deducted when the cumulative consumption of your account exceeds the quota. You must settle the payment at least once a month.

After creating a pay-as-you-go ECS resource, you can change its configurations. For more information, see #unique_22 and #unique_24.

You can change the billing method of pay-as-you-go ECS resources you created. For more information, see Switch the billing method from Pay-As-You-Go to Subscription.

You can view your bills by using the following methods:

- To view the fee calculation method, see Billing.
- To understand how ECS resource status affects the billing duration, see Billing duration.

Note:
If you stop an ECS instance but do not release related resources, fees continue to generate.

- For information about settlement, see Settlement period.

Applicable resources

Currently, the pay-as-you-go billing method is available for the following ECS resources:

- ECS instances
- Images
- Disks
- Internet bandwidth (Pay-By-Bandwidth)
- Snapshots
In addition to the instance type, you must also configure the block storage, image, and network type when you create an instance. The images and cloud disks created along with the pay-as-you-go ECS instance also use the pay-as-you-go billing method. However, you can select the billing method for network usage.

**Note:**
After creating a pay-as-you-go ECS instance, you can attach a separately created pay-as-you-go cloud disk to the instance. For more information, see #unique_32.

Snapshots start to incur fees after you create them.

You can view the total price of the preceding resources in the lower-left part of the instance creation page.

![Billing interface](image)

In the preceding figure,

- **Total** price is the price of the following resources:
  - ECS instances
  - Disks
  - Internet bandwidth (Pay-By-Bandwidth)

**Note:**
If you select Pay-By-Traffic as the billing method for network usage, the total price does not include the price for Internet bandwidth. For more information, see Billing methods of public bandwidth.

- **Image Fees** indicates that you selected a paid image when creating the instance.

**Billing duration**

If a pay-as-you-go ECS instance is out of service due to overdue payment, the billing of its resources is suspended. The billing resumes after you settle the overdue payment and reactivate the instance.

The following table describes the billing duration of each resource type on the prerequisite that you have no overdue payments.
Elastic Compute Service

<table>
<thead>
<tr>
<th>Resource</th>
<th>Billing duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECS instances</td>
<td>The billing duration is affected by the network type of the instance.</td>
</tr>
<tr>
<td></td>
<td>• For an ECS instance in a classic network, billing starts when the instance is created and stops when the instance is released.</td>
</tr>
<tr>
<td></td>
<td>• For an ECS instance in a VPC, the billing duration depends on whether the No Fees for Stopped Instances (VPC-Connected) feature is enabled.</td>
</tr>
<tr>
<td></td>
<td>- If this feature is not enabled, billing starts when the instance is created and stops when the instance is released.</td>
</tr>
<tr>
<td></td>
<td>- If this feature is enabled, billing starts when the instance is created or is restarted in the ECS console and stops when the instance is stopped by using the ECS console or when the instance is released. For more information, see No Fees for Stopped Instances (VPC-Connected).</td>
</tr>
<tr>
<td>Images</td>
<td>The billing starts when the instance is created and stops when the instance is released.</td>
</tr>
<tr>
<td>Cloud disks (system disks)</td>
<td>The billing starts when the instance is created and stops when the instance is released.</td>
</tr>
<tr>
<td>Cloud disks (data disks)</td>
<td>The billing starts when the data disk is created and stops when the data disk is released.</td>
</tr>
<tr>
<td>Internet bandwidth (Pay-By-Bandwidth)</td>
<td>The billing starts when Internet bandwidth (Pay-By-Bandwidth) is enabled and stops when Internet bandwidth is disabled or the ECS instance is released.</td>
</tr>
<tr>
<td></td>
<td>For information about how to disable Internet bandwidth, see #unique_24.</td>
</tr>
<tr>
<td>Snapshots</td>
<td>The billing starts when a snapshot is created and stops when the snapshot is deleted.</td>
</tr>
</tbody>
</table>

**Notice:**
If you stop the instance by switching off its operating system, you cannot enjoy the benefits provided by the No Fees for Stopped Instances (VPC-Connected) feature.

You can purchase reserved instances to reduce your costs. For more information, see #unique_12.
If the fee for a pay-as-you-go ECS instance is less than USD 0.01 for the entire lifecycle of the instance, USD 0.01 is charged.

To avoid unexpected fees incurred when the active duration is exceeded, we recommend that you enable the automatic release feature. If automatic release is enabled, the billing stops when the resources are released. The stop time is accurate to seconds.

**Billing**

Pay-as-you-go ECS resources start to generate fees after being created. The resources are billed separately. You can calculate the total fee you need to pay for a certain period of time based on the configurations you choose. The following table describes the billing cycle of each ECS resource and the formula used to calculate their fees.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Billing cycle</th>
<th>Formula</th>
<th>Unit price</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECS instances</td>
<td>Second</td>
<td>Unit price of the instance type × Billing duration</td>
<td>For more information, see Instance Fee on ECS Pricing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Note: Local disks attached to an instance are billed together with the instance.</td>
</tr>
<tr>
<td>Images</td>
<td>Second</td>
<td>Image unit price × Billing duration</td>
<td>You can view the price on the purchase page and in the Alibaba image marketplace.</td>
</tr>
<tr>
<td>Cloud disks (system disks)</td>
<td>Second</td>
<td>Disk unit price × Disk capacity × Billing duration</td>
<td>For more information, choose Storage Fee &gt; System Disk on ECS Pricing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Note: The price on the page is USD/100 GiB/hour. Divide it by 100 to obtain the unit price per GiB.</td>
</tr>
<tr>
<td>Resource</td>
<td>Billing cycle</td>
<td>Formula</td>
<td>Unit price</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------</td>
<td>-----------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Cloud disks (data disks)</td>
<td>Second</td>
<td>Disk unit price × Disk capacity × Billing duration</td>
<td>For more information, choose Storage Fee &gt; Data Disk on ECS Pricing.</td>
</tr>
<tr>
<td>Internet bandwidth (Pay-By-Bandwidth)</td>
<td>Second</td>
<td>Bandwidth unit price × Bandwidth value × Billing duration</td>
<td>Tiered pricing is used for fixed bandwidth. You can select a bandwidth value on the purchase page to view the changes in fees.</td>
</tr>
<tr>
<td>Snapshots</td>
<td>Hour</td>
<td>Snapshot unit price × Snapshot capacity × Billing duration</td>
<td>For more information, see Snapshot Fee on ECS pricing.</td>
</tr>
</tbody>
</table>

**Note:**
- If the billing cycle is one second, the fee generated each second is added on to the bill. If an hourly price is displayed, you can divide the price by 3600 to obtain the price per second.
- If the billing cycle is one hour, the fee generated every hour is added on to the bill. A usage duration less than an hour is calculated as an hour.

Assume that you created a pay-as-you-go ECS instance in the China (Qingdao) region and the resource usage duration is from 11:00:00 to 12:00:00 on August 8, 2019, with a subscription duration of three months.

**Note:**
The price is only for reference. For the exact price, visit the links in the preceding table.
Settlement period

The fees for pay-as-you-go resources are paid each hour. These fees are paid together with the fees incurred by other postpaid products under your account. If you have a quota agreement with Alibaba Cloud, fees are deducted when the cumulative consumption of your account exceeds the quota. In the case that the cumulative monthly consumption of your account is less than the quota, fees are deducted on the first day of the following month.

- If your default payment method is bank card, the quota is USD 1,000.
- If your default payment method is PayPal or Paytm (India) account, the quota depends on your ECS resource usage.

Fee deduction occurs on three days: due date (T), T+7, and T+14. In fee deduction fails on the due date (T), the system attempts to deduct fees again on the day T+7 and day T+14. If fee deduction fails for these three times, the instance goes out of service on the day T+15.

The resource status changes as follows in the event of an overdue payment:

1. Within 15 days after the overdue payment, you can use existing ECS resources but cannot purchase new ECS instances, upgrade the instance, or renew the instance.
2. Within 15 days after the instance is out of service, you must submit a ticket to settle the overdue payment and then reactivate the instance. Otherwise, the instance will be automatically released. For information about resource status, see Resource status when an ECS instance is out of service.
3. More than 15 days after the instance is out of service, the pay-as-you-go ECS instances are released.
Resource status when an ECS instance is out of service

⚠️ **Notice:**
The system may send you notifications that you have overdue payments. When this occurs, please clear all overdue payments to avoid instances being released. Please note that your instances may be released at a system-selected time after the payment due date. If you still have problems, [submit a ticket](#).

If all three deductions fail, the ECS instance is out of service. The following table describes the resource status if your ECS instance is out of service.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Within 15 days after out-of-service</th>
<th>More than 15 days after out-of-service</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECS instances</td>
<td>The ECS instance is retained but it is out of service. When a pay-as-you-go ECS instance is Out of service, it enters the Expired state and the billing stops. After the instance stops providing services, you cannot remotely connect to the instance, or access websites deployed on the instance. Service errors will occur.</td>
<td>The ECS instance is released.</td>
</tr>
<tr>
<td>Images</td>
<td>Images are unavailable.</td>
<td>Images are unavailable.</td>
</tr>
</tbody>
</table>

**Note:**
If your ECS instance is released due to overdue payment, Alibaba Cloud will send you an email notification.
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<table>
<thead>
<tr>
<th>Resource</th>
<th>Within 15 days after out-of-service</th>
<th>More than 15 days after out-of-service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block storage</td>
<td>• Cloud disks and data on them are retained, but the cloud disks cannot be used.</td>
<td>• Cloud disks are released and data on them cannot be restored.</td>
</tr>
<tr>
<td></td>
<td>• Local disks and data on them are retained, but the local disks cannot be used.</td>
<td><strong>Note:</strong> Cloud disks (data disks) created with pay-as-you-go ECS instances and pay-as-you-go cloud disks (data disks) created separately on the Disks page of the ECS console are released, regardless whether they are attached to the instance.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> If the performance of cloud disks or local disks is limited, they cannot properly process I/O read and write requests. This affects the normal running of the ECS instance mounted to these disks, such as excessive time needed to perform operations and unpredictable power-off or restart failures for some operating systems.</td>
<td>• Local disks are released and data on them cannot be restored.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Shared block storage devices are automatically detached, but data on them is retained.</td>
</tr>
<tr>
<td>IP addresses</td>
<td>• Instances in classic networks: Public IP addresses are retained.</td>
<td>• Instances in classic networks: Public IP addresses are released.</td>
</tr>
<tr>
<td></td>
<td>• Instances in a VPC</td>
<td>• Instances in a VPC</td>
</tr>
<tr>
<td></td>
<td>- Public IP addresses are retained.</td>
<td>- Public IP addresses are released.</td>
</tr>
<tr>
<td></td>
<td>- EIPs associated with the instances are not affected.</td>
<td>- EIPs are disassociated from instances.</td>
</tr>
<tr>
<td>Snapshots</td>
<td>All snapshots are retained but automatic snapshots cannot be created.</td>
<td>All snapshots will be deleted except for those used to create cloud disks or custom images.</td>
</tr>
</tbody>
</table>
5 No Fees for Stopped Instances (VPC-Connected)

The No Fees for Stopped Instances (VPC-Connected) feature allows some ECS resources to be recycled while retaining ECS instances, reducing upkeep costs. It does not stop billing for all resources.

Prerequisites

The No Fees for Stopped Instances (VPC-Connected) feature is applicable to ECS instances that meet the following requirements:

- The network type of the instances is VPC.
- The instances are pay-as-you-go instances.

You can change the billing method of an instance from subscription to pay-as-you-go. For more information, see Switch the billing method from Subscription to Pay-As-You-Go.

- The instance family is not bound with local disks.

Instance families that are bound with local disks, such as d1, d1ne, i1, i2, i2g, ga1, and gn5, do not support No Fees for Stopped Instances (VPC-Connected). For more information, see the Local storage (GiB) column in #unique_6.

The No Fees for Stopped Instances (VPC-Connected) feature is disabled by default. For information about how to enable this feature, see the Enable the No Fees for Stopped Instances (VPC-Connected) feature section.

Applicable resources

This feature recycles some resources while retaining ECS instances to reduce the overall costs.

- The No Fees for Stopped Instances (VPC-Connected) feature is applicable to the following resources:
  - ECS instances (including vCPUs and memory)
  - Fixed public IP addresses and bandwidth
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Pricing / 5 No Fees for Stopped Instances (VPC-Connected)

- The No Fees for Stopped Instances (VPC-Connected) feature is not applicable to some ECS resources. The following list provides some examples of these resources:
  - System disks
  - Data disks attached to ECS instances
  - Elastic IP addresses (EIPs) and bandwidth
  - Images
  - Snapshots

**Triggering conditions**

After the No Fees for Stopped Instances (VPC-Connected) feature is enabled, it is triggered only when the instance is stopped by one of the following methods:

- Operations in the ECS console. For more information, see #unique_34.
- API requests initiated by using Alibaba Cloud CLI or SDKs. For more information, see #unique_35.
- Overdue payments.

⚠️ **Notice:**

If you stop an ECS instance by running a command from within the operating system, the No Fees for Stopped Instances (VPC-Connected) feature is not triggered.

If an ECS instance is in the start period, the No Fees for Stopped Instances (VPC-Connected) feature cannot be triggered. The start period is the time it takes for a new instance that is started for the first time to enter the Running state from the Stopped state. For more information, see #unique_36.

**Impacts**

After the No Fees for Stopped Instances (VPC-Connected) feature is triggered for an ECS instance, the ECS instance (including vCPUs and memory) and its fixed public IP address are recycled. These resources no longer incur fees. However, the following risks exist:

- The resources that are stopped are recycled. The instance may fail to restart due to insufficient resources. In this case, you can try again later or switch to another instance type. For more information, see #unique_22.

Note:
We recommend that you start the instance in advance to avoid service interruptions due to insufficient resources.

- Because the fixed public IP address has been recycled, the public IP address may change after the instance is restarted. However, the private IP address remains unchanged.

**Note:**
If your application depends on a specific public IP address, we recommend that you disable the No Fees for Stopped Instances (VPC-Connected) feature or convert the fixed public IP address to an EIP. For more information, see Disable the No Fees for Stopped Instances (VPC-Connected) feature or #unique_37.

- For burstable instances, the current CPU credit balance is cleared and the instances stop earning CPU credits. After you restart the burstable instances, they begin to earn CPU credits again. For more information about CPU credits of burstable instances, see #unique_38/unique_38_Connect_42_section_h4n_jgr_6b4.

In some cases, you may need to restart your instances multiple times in a short amount of time. We recommend that you disable the No Fees for Stopped Instances (VPC-Connected) feature to ensure that the instances can be started and run normally. The scenarios are as follows:

- **Replace the system disk** (#unique_40)
- **#unique_41** (#unique_42)
- **#unique_43** (#unique_44)

For an instance that is stopped due to an overdue payment, if you clear the overdue payment within the specified time and reactivate the ECS instance, whether the fixed public IP address is retained based on the status of the No Fees for Stopped Instances (VPC-Connected) feature:

- **When the feature is enabled:** After the instance is stopped due to an overdue payment, it enters the No Fees for Stopped Instances state. Its vCPUs, memory, and fixed public IP address are automatically released and the fixed public IP address may change after the instance is reactivated.
- **When the feature is disabled:** After the instance is stopped due to an overdue payment, the billing of the instance is stopped. But the fixed public IP address is retained and remains unchanged after the instance is reactivated.

**Note:**
ECS instances do not remain in the Stopped state after your account has an overdue payment. For more information, see Pay-as-you-go.

Enable the No Fees for Stopped Instances (VPC-Connected) feature

The No Fees for Stopped Instances (VPC-Connected) feature is disabled by default to avoid unexpected impacts on your applications. Enable the No Fees for Stopped Instances (VPC-Connected) feature after you make sure that it is suitable for your applications. For more information, see Impacts.

The following operations describe how to enable the No Fees for Stopped Instances (VPC-Connected) feature for all applicable instances under your account and the instances will enter the No Fees for Stopped Instances state after they are stopped. For more information, see Prerequisites.

1. Log on to the ECS console.
2. In the Common Settings section of the Overview page, click Custom Settings.

3. Turn on No Fees for Stopped Instances (VPC-Connected).
4. In the message that appears, read the note and click OK.
5. In the Custom Settings dialog box, click OK.

Disable the No Fees for Stopped Instances (VPC-Connected) feature

The following operations describe how to disable the No Fees for Stopped Instances (VPC-Connected) feature for all applicable instances under your account and the instances will not enter the No Fees for Stopped Instances state after they are stopped.

If an ECS instance is in the No Fees for Stopped Instances state, its vCPUs, memory, and fixed public IP address are already recycled. Therefore, after the No Fees for Stopped Instances (VPC-Connected) feature is disabled, no fees are charged for the vCPUs and memory until these resources are reassigned after the instance is restarted. The status of the IP address is subject to the type of the IP address.
• If the instance uses a fixed public IP address before it is stopped, a new public IP address is assigned to the instance.

• If the ECS instance is associated with an EIP before it is stopped, the EIP remains unchanged.

1. Log on to the ECS console.

2. In the Common Settings section of the Overview page, click Custom Settings.

3. Turn off No Fees for Stopped Instances (VPC-Connected).

4. In the message that appears, read the note and click OK.

5. In the Custom Settings dialog box, click OK.

Configure a single instance to stop incurring fees after it is stopped

Regardless of whether the No Fees for Stopped Instances (VPC-Connected) feature is enabled, you can still configure the Stop mode when you stop a single instance. For more information, see #unique_34.

• If you select Retain Instance and Continue Charging After Instance Is Stopped, the instance enters the Keep Stopped Instances and Continue Billing state.

• If you select No Charges After Instance Is Stopped, the instance enters the No Fees for Stopped Instances state.
Stop Instance

The operation will be performed on the selected 1 Instances. Are you sure you want to proceed?

Stop Mode:  
- Stop
- Force Stop

Stopped By:  
- Retain Instance and Continue Charging After Instance Is Stopped
- No Charges After Instance Is Stopped

The operation will be performed on the selected 1 Instances. The instances will not be billed after being stopped.

After a subscription instance is stopped, its expiration time does not change.

If you need to stop an instance for system disk replacement, disk reinitialization, instance upgrade, or private IP address modification, we recommend that you select Keep Stopped Instances and Continue Billing to avoid startup failure.

Reference

You can also use the scheduled startup and shutdown feature of Operation Orchestration Service (OOS) to automatically manage the startup and shutdown time of multiple ECS instances. You can combine this feature with the No Fees for Stopped Instances (VPC-Connected) feature to reduce costs. For more information, see #unique_45.
6 Renew instances

6.1 Renewal overview

When a subscription instance expires, the instance stops providing services. To continue using the instance after it expires, you must renew it within the designated period. Otherwise, instance resources such as vCPUs, memory, and disks are released and the stored data is permanently lost. This topic describes the instance renewal feature of ECS.

Overview

The renewal feature is only applicable to subscription instances. Pay-as-you-go instances do not need to be renewed, but you must ensure that you have sufficient balance in your linked bank card, PayPal, or Paytm (India) account to cover the related costs.

If you renew the instance before it expires, the instance continues to work as expected and all of its resources are retained. For more information about the status of a subscription instance after it expires, see Subscription.

You cannot cancel a renewal order for a subscription instance after the payment is made. The following section describes the functions related to instance renewal.

- Manual renewal: You can manually renew the instance in the ECS console at any time before the instance is automatically released. For more information, see Manually renew an instance.

- Auto-renewal: After the auto-renewal feature is enabled, the instance is automatically renewed before it expires. You can enable this feature on instances to reduce management costs and prevent the instances from being automatically released. For more information, see Enable auto-renewal.

- Renewal and downgrade: If the current ECS instance configurations exceed your requirements, you can downgrade the instance configurations when you renew the instance to minimize costs. The new configurations take effect starting from the next billing cycle. For more information, see Downgrade an instance during renewal.

- Nonrenewal: You can choose not to renew instances upon expiration. In this case, the instance is stopped upon expiration and you will receive an expiration notification only once. You can modify the renewal settings at any time before the instance is stopped.

The following table lists the differences among the three methods.
<table>
<thead>
<tr>
<th>Renewal method</th>
<th>Change configurations</th>
<th>Renewal time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual renewal</td>
<td>Not supported</td>
<td>Before the ECS instance is automatically released.</td>
</tr>
<tr>
<td>Auto-renewal</td>
<td>Not supported</td>
<td>Renew the instance on the following days:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The third day and the first day before expiration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The expiration day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The seventh day and fifteenth day after expiration</td>
</tr>
<tr>
<td>Renewal and downgrade</td>
<td>Supported</td>
<td>• Within 15 days before the ECS instance expires.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Within 15 days after the ECS instance expires, but before the instance is</td>
</tr>
<tr>
<td></td>
<td></td>
<td>automatically released.</td>
</tr>
</tbody>
</table>

For example, if you have a subscription instance that is set to expire on April 30, 2019, you can renew and downgrade the instance from April 16, 2019 to April 30, 2019. If you do not renew the instance during this period, it enters the Expired and Being Recycled state. In this case, you can still renew the instance from May 1, 2019 to May 15, 2019. If you do not renew the instance, it is automatically released on May 16, 2019.

**Manual renewal**

Manual renewal only renews the basic Internet bandwidth of an instance, but not its temporarily upgraded Internet bandwidth. For information about how to upgrade the basic Internet bandwidth, see #unique_20.
The renewal period options are as follows:

- One month, two months, three months, four months, five months, six months, seven months, eight months, and nine months
- One year

The status of a subscription ECS instance after expiration depends on whether the auto-renewal feature is enabled. The following table describes the effect of manual renewal for instances under different statuses:

<table>
<thead>
<tr>
<th>Auto-renewal enabled</th>
<th>Time period after expiration</th>
<th>Instance status</th>
<th>Effect of manual renewal</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Within 15 days after expiration</td>
<td>The instance is stopped.</td>
<td>If the instance is manually renewed, the next billing cycle starts from the day of its renewal. For example, if your instance was stopped at 00:00:00 on May 10, 2017, but you successfully renewed it for one month at 08:09:35 on May 23, 2017, the billing cycle for this renewal is from 08:09:35 on May 23, 2017 to 00:00:00 on June 24, 2017.</td>
</tr>
<tr>
<td>15 days after expiration</td>
<td>The instance and its resources are released or unbound.</td>
<td>Manual renewal cannot be performed.</td>
<td></td>
</tr>
<tr>
<td>30 days after expiration</td>
<td>The instance and its resources are already released or unbound.</td>
<td>Manual renewal cannot be performed.</td>
<td></td>
</tr>
<tr>
<td>Auto-renewal enabled</td>
<td>Time period after expiration</td>
<td>Instance status</td>
<td>Effect of manual renewal</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------</td>
<td>----------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Yes</td>
<td>Within 15 days after expiration</td>
<td>The instance is working properly.</td>
<td>If the instance is manually renewed, the next billing cycle starts from the day that the instance expired. For example, if your instance is set to expire at 00:00:00 on April 25, 2017, but you successfully renewed it for one month on May 9, 2017, the billing cycle for this renewal is from 00:00:00 on April 25, 2017 to 00:00:00 on May 25, 2017.</td>
</tr>
<tr>
<td>15 days after expiration</td>
<td>The instance is stopped.</td>
<td>If the instance is manually renewed, the next billing cycle starts from the day of renewal. For example, if your instance was stopped at 00:00:00 on May 10, 2017, but you successfully renewed it for one month at 08:09:35 on May 23, 2017, the billing cycle for this renewal is from 08:09:35 on May 23, 2017 to 00:00:00 on June 24, 2017.</td>
<td></td>
</tr>
<tr>
<td>30 days after expiration</td>
<td>The instance and its resources are released or unbound.</td>
<td>Manual renewal cannot be performed.</td>
<td></td>
</tr>
</tbody>
</table>

**Auto-renewal**

You can enable auto-renewal on the Create Instance, Instances, or Renew page. Auto-renewal cannot be enabled for subscription ECS instances that are expired. The renewal period options are as follows:
When you enable auto-renewal on the Create Instance page:

- If the subscription of the instance is one month, two months, three months, or six months, the instance automatically renews itself every month after the subscription ends. This continues until you cancel auto-renewal.
- If the subscription of the instance is one year, the instance automatically renews itself every year after the subscription ends. This continues until you cancel auto-renewal.

On the Instances page, you can enable auto-renewal for existing instances. You can set the auto-renewal period to one month or one year. You can also modify the auto-renewal period for an existing instance on the Instances page.

On the Renew page, you can enable auto-renewal for existing instances. You can set the auto-renewal period to one month, two months, three months, six months, or one year. You can also modify the auto-renewal period for an existing ECS instance on the Renew page.

When the subscription period ends, the instance will renew for the period you select and you are billed for the new cycle. The instance will then continue to automatically renew for the period you select until you cancel auto-renewal. For example, if you select three months, the instance will renew every three months until you cancel auto-renewal.

After auto-renewal is enabled, the instance will be automatically renewed before it expires.

- Alibaba Cloud sends an email reminder on the seventh day before the instance expires (T-7).
- Alibaba Cloud deducts the payment for the next billing cycle from your bank card, PayPal, or Paytm (India) account on the third day before the instance expires (T-3). If the payment deduction fails, Alibaba Cloud will attempt to deduct the payment again up to five times until the deduction is successful, on the following days: the first day before the instance expires (T-1), the expiration day (T), the seventh day after the instance expires (T+6), and the fifteenth day after the instance expires (T+14).

- At 08:00:00 (UTC+8) on the deduction day, Alibaba Cloud performs auto-renewal on all the ECS instances that are set to expire in succession. This causes the actual renewal time to be between 08:00:00 (UTC+8) and 18:00:00 (UTC+8).
- If the payment is deducted before T+14, the instance will start the next billing cycle from the day the instance is set to expire.
- Otherwise, the instance will be in the expired state from T+15. Instances in the expired state cannot be logged on to or remotely connected to. If the instance has expired,
you can only manually renew the instance. If the instance is not manually renewed within 15 days after it enters the expired state, the instance will be released and its data will be permanently lost.

- If the auto-renewal payment fails, Alibaba Cloud will send you an email reminder. Check whether you have received any reminders to avoid unexpected expiration of instances.
- If manual renewal is completed before auto-renewal, auto-renewal will take effect starting from the next billing cycle.

Assume that you purchased an instance at 10:00:00 on November 8, 2017, with a subscription period of one month and auto-renewal enabled. The instance is set to expire at 00:00:00 on December 9, 2017. The following figure shows the actions performed in the first auto-renewal round. For information about status changes that occur after subscription resources expire, see Subscription.

### Renewal and downgrade

You can use the renewal and downgrade feature to complete the following tasks:

- Downgrade the specifications of a subscription instance.
- Change the billing method of data disks from subscription to pay-as-you-go.
- Change the billing method of Internet bandwidth.
• Adjust the Internet bandwidth.

The renewal period options are as follows:

• One month, two months, three months, four months, five months, six months, seven months, eight months, and nine months
• One year

When you use the renewal and downgrade feature, note that:

• After you renew and downgrade an instance, the new configurations take effect starting from the next billing cycle. The current configurations continue until the end of the current billing cycle.
• If you perform the following operations during the renewal, you must restart the instance within the first seven days of the next billing cycle for the new configurations to take effect. If you restart the instance on the seventh day of the new billing cycle, the instance continues to use the original configurations for the first six days.

Notice:
You must restart an ECS instance by using the ECS console or by calling the RebootInstance operation. Restarting the instance from within the operating system will not work.

- Change the instance specifications.
- Change the Internet bandwidth value of a classic network-type instance from 0 Mbit/s to a non-zero value for the first time.
• After you renew and downgrade an instance, you cannot perform the following operations within the rest of the current billing cycle:

  - #unique_20
  - Resize cloud disks
  - #unique_49
  - #unique_50
6.2 Manually renew an instance

This topic describes how to manually renew a subscription instance. Before a subscription instance is automatically released, you can manually renew the instance to extend its service duration.

Context

Manual renewal only renews the basic Internet bandwidth of an instance, but not its temporarily upgraded Internet bandwidth. For information about how to upgrade the basic Internet bandwidth, see #unique_20.

Options for renewal duration vary based on the number of instances that you select for renewal. For more information, see the purchase page.

Renew one instance

1. Log on to the ECS console.
2. In the left-side navigation pane, choose Instances & Images > Instances.
3. In the top navigation bar, select a region.
4. Find the instance you want to renew and click Renew in the Actions column.
5. Select a value for the renewal duration.
6. Select ECS Terms of Service and click Create Order.
7. Follow the instructions to complete the payment.

Renew multiple instances

1. Log on to the ECS console.
2. In the left-side navigation pane, choose Instances & Images > Instances.
3. In the top navigation bar, select a region.
4. Select multiple ECS instances you want to renew.
5. At the bottom of the page, click Renew.
6. On the page that appears, click Batch Change.
7. Select a renewal duration for the instances, and click OK.
8. Select ECS Terms of Service and click Create Order.
9. Follow the instructions to complete the payment.

Related topics
#unique_51
6.3 Enable auto-renewal

Compared with manual renewal, auto-renewal helps minimize management costs and prevent service interruptions of ECS instances if you fail to renew the instances. This topic describes how to enable the auto-renewal feature.

Context

After auto-renewal is enabled, the instance will be automatically renewed before it expires.

- Alibaba Cloud sends an email reminder on the seventh day before the instance expires (T-7).
- Alibaba Cloud deducts the payment for the next billing cycle from your bank card, PayPal, or Paytm (India) account on the third day before the instance expires (T-3). If the payment deduction fails, Alibaba Cloud will attempt to deduct the payment again up to five times until the deduction is successful, on the following days: the first day before the instance expires (T-1), the expiration day (T), the seventh day after the instance expires (T+6), and the fifteenth day after the instance expires (T+14).
  - At 08:00:00 (UTC+8) on the deduction day, Alibaba Cloud performs auto-renewal on all the ECS instances that are set to expire in succession. This causes the actual renewal time to be between 08:00:00 (UTC+8) and 18:00:00 (UTC+8).
  - If the payment is deducted before T+14, the instance will start the next billing cycle from the day the instance is set to expire.
  - Otherwise, the instance will be in the expired state from T+15. Instances in the expired state cannot be logged on to or remotely connected to. If the instance has expired, you can only manually renew the instance. If the instance is not manually renewed within 15 days after it enters the expired state, the instance will be released and its data will be permanently lost.
  - If the auto-renewal payment fails, Alibaba Cloud will send you an email reminder. Check whether you have received any reminders to avoid unexpected expiration of instances.
  - If manual renewal is completed before auto-renewal, auto-renewal will take effect starting from the next billing cycle.

For more information about the fund deduction process of auto-renewal, see Renewal overview.
Enable auto-renewal on the Create Instance page

You can enable auto-renewal on the Create Instance page, as shown in the following figure. For more information about how to create an ECS instance, see #unique_52.

Enable auto-renewal on the Instances page

On the Instances page, you can enable auto-renewal for one or more ECS instances or change the renewal period.

1. Log on to the ECS console.
2. In the left-side navigation pane, choose Instances & Images > Instances.
3. In the top navigation bar, select a region.
4. Select a method to enable auto-renewal.
   - Enable auto-renewal for one ECS instance: Find the instance and choose More > Instance Settings > Configure Auto-renewal in the Actions column.
   - Enable auto-renewal for one or more ECS instances: Select the instances. In the lower part of the instances list, choose More > Instance Settings > Configure Auto-renewal.
5. In the Configure Auto-renewal dialog box that appears, turn on Auto-renewal and set Renewal Duration. Click OK.

Enable auto-renewal on the Renew page

On the Renew page, you can enable auto-renewal for one or more ECS instances or change the renewal period.

1. Log on to the ECS console.
2. In the top navigation bar, choose Billing > Renew.
3. In the left-side navigation pane, click Elastic Compute Service.
4. Click the Manual tab.
   If the nonrenewal option is set for some instances, click the Nonrenewal tab to modify the configuration.
5. Select a method to enable auto-renewal.

- Enable auto-renewal for one ECS instance: Find the instance and click **Enable Auto Renewal** in the **Actions** column.
- Enable auto-renewal for one or more ECS instances: Select the instances. In the lower part of the instances list, click **Enable Auto Renew**.

6. Set Unified Auto Renewal Cycle and click **Auto Renew**.

   Click the **Auto** tab. The previously selected instances are displayed in the list, indicating that auto-renewal is enabled.

### 6.4 View auto-renewal status

If the auto-renewal is enabled for a subscription instance, the instance is automatically renewed before it expires. This topic describes how to view the auto-renewal status of an ECS instance.

#### View the auto-renewal status of an ECS instance on the Instances page

1. Log on to the **ECS console**.
2. In the left-side navigation pane, choose **Instances & Images > Instances**.
3. In the top navigation bar, select a region.
4. Find the ECS instance and view its auto-renewal status in the **Automatic Renewal** column.

   If a renewal period (such as **1 month**) is displayed in the **Automatic Renewal** column, auto-renewal is enabled for the instance.

   **Note:**

   If the **Automatic Renewal** column is not displayed, click ☰ in the upper-right corner, select **Automatic Renewal**, and click **OK**.

#### View the auto-renewal status of an ECS instance on the Billing Management page

1. Log on to the **ECS console**.
2. In the top navigation bar, choose **Billing Management > Renew**.
3. In the left-side navigation pane, click **Elastic Compute Service**.
4. Click the **Auto-Renew** tab.

   If the ECS instance is listed on the **Auto-Renew** tab, the auto-renewal feature is enabled for the instance.

### 6.5 Disable auto-renewal

If you do not need the instance to be automatically renewed when its current billing cycle ends, we recommend that you disable the auto-renewal feature in advance. If auto-renewal is enabled, the system automatically attempts to deduct fees from your account from the third day before the instance expires. Disable auto-renewal before the fund deduction if needed.

**Context**

When you disable auto-renewal, you can set the Nonrenewal function.

- If you do not select Nonrenewal for an instance, the instance is manually renewed through **Manual Renewal**.
- If you select **Nonrenewal** for an instance, the instance will not be renewed upon expiration. You can manually renew the ECS instance before it expires. However, the ECS instance is stopped immediately after it expires. Before that, you will be reminded only once to change your selection.

**Disable auto-renewal on the Instances page**

1. Log on to the **ECS console**.
2. In the left-side navigation pane, choose **Instances & Images > Instances**.
3. In the top navigation bar, select a region.
4. Select a method to disable auto-renewal.
   - Disable auto-renewal for one ECS instance: Find the instance and choose **More > Instance Settings > Configure Auto-renewal** in the **Actions** column.
   - Disable auto-renewal for one or more ECS instances: Select the instances. In the lower part of the instances list, choose **More > Instance Settings > Configure Auto-renewal**.
5. In the Configure Auto-renewal dialog box that appears, turn off **Auto-renewal** and choose whether to select **Not Renew**. Click **OK**.
Enable manual renewal on the Renew page

1. Log on to the ECS console.
2. In the top navigation bar, choose Billing > Renew.
3. In the left-side navigation pane, click Elastic Compute Service.
4. Click the Auto-Renew tab.
5. Select a method to enable manual renewal.
   - Enable manual renewal for one ECS instance: Find the instance and click Modify Auto-Renew in the Actions column.
   - Enable manual renewal for one or more ECS instances: Select the instances. In the lower part of the instances list, click Edit Auto Renewal.
6. Select Disable Auto-Renew. Click OK.
   Click the Manual tab. The previously selected instances are displayed in the list, indicating that manual renewal is enabled.

6.6 Downgrade an instance during renewal

This topic describes how to downgrade the specifications of a subscription instance when you renew the instance. The new specifications take effect in the next billing cycle. The original specifications remain unchanged for the rest of the current billing cycle.

Context

You can also use the Renewal and Downgrade feature to complete the following tasks:

- Downgrade the instance specifications.
- Change the billing method of data disks from subscription to pay-as-you-go.
- Change the billing method for network usage from Pay-By-Bandwidth to Pay-By-Traffic.
- Adjust the Internet bandwidth.

When you use the Renewal and Downgrade feature, the following limits apply:

- If you perform the following operations during the instance renewal, you must restart the ECS instance in the ECS console or by calling the unique_55 operation within the first seven days of the next billing cycle for the new specifications to take effect. If you
restart the instance on the seventh day of the new billing cycle, the ECS instance uses the original high specifications for the first six days.

- Downgrade the instance specifications.
- Adjust the Internet bandwidth. The first time you increase the bandwidth value of a classic network-type instance from 0 Mbit/s, you must restart the ECS instance.

- You cannot perform the following operations after the renewal and downgrade:
  - #unique_20
  - Resize a cloud disk
  - #unique_49
  - #unique_50

**Procedure**

1. Log on to the **ECS console**.
2. In the left-side navigation pane, choose **Instances & Images** > **Instances**.
3. In the top navigation bar, select a region.
4. Find the target subscription instance. In the **Actions** column, click **Upgrade/Downgrade**.
5. In the Upgrade/Downgrade Wizard dialog box, select **Renewal and Downgrade** and click **Continue**.
6. On the Renewal and Downgrade page, complete the following operations:
   
a) Select an instance type.
   
   For instance types that support specifications change, see the information displayed on the page.
   
b) Set the instance restart time.
   
   This setting is only mandatory when you change the instance specifications. The restart time cannot be later than the 7th day of the next billing cycle. We recommend that you set the restart time to a point in time during off-peak hours.
   
c) Change the billing method of data disks from subscription to pay-as-you-go.
   
   If the billing method remains unchanged, the data disks have the same billing cycle as the instance in the next billing cycle.
   
d) Set Internet bandwidth.

<table>
<thead>
<tr>
<th>Current billing method</th>
<th>Supported operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay-By-Bandwidth</td>
<td>• Reduce the bandwidth value.</td>
</tr>
<tr>
<td></td>
<td>Reducing the bandwidth value to 0 Mbit/s has the following impacts on public IP addresses:</td>
</tr>
<tr>
<td></td>
<td>- For classic network-type ECS instances, public IP addresses remain unchanged.</td>
</tr>
<tr>
<td></td>
<td>- For VPC-type ECS instances, public IP addresses are released when the next billing cycle begins.</td>
</tr>
<tr>
<td></td>
<td>• Change the billing method to Pay-By-Traffic and set peak bandwidth.</td>
</tr>
<tr>
<td>Pay-By-Traffic</td>
<td>You can set the peak bandwidth based on your specific needs.</td>
</tr>
</tbody>
</table>

e) Set the renewal duration.

7. Read and confirm ECS Terms of Service. Then, click Create Order.

8. Follow the instructions to complete payment.
7 Switch the billing method from Pay-As-You-Go to Subscription

This topic describes how to switch the billing method of your instance from Pay-As-You-Go to Subscription in the ECS console. After you create a Pay-As-You-Go instance, you can convert its billing method to Subscription to pay only for the reserved resources.

Prerequisites

The ECS instance you want to switch the billing method for must meet the following requirements:

• The instance belongs to your account.
• The following instance types are not applicable:
  - Generation I: t1, s1, s2, s3, m1, m2, c1, or c2
  - Generation n1, n2, or e3

  **Note:**
  For more information about these instance types, see #unique_56.

• The instance cannot be a preemptible instance.
• There is no unpaid switch order for the instance.

  If there is an unpaid switch order, you must cancel the unpaid order and then place another order to switch the billing method.

• Auto release is not set for the instance.

  If auto release has been set for an instance, you must disable the auto release configuration and then switch the billing method. For more information, see #unique_19.

• The instance is in the Running or Stopped state.

  Example: An order to switch the billing method has been placed when the ECS instance is in the Running or Stopped state. However, the instance status has changed when payment is attempted for the order. The preceding requirement is not met. The order fails and the billing method remains unchanged. You can go to the billing center and pay for the order when the instance is in the Running or Stopped state again.

Context
You can switch a maximum of 20 Pay-As-You-Go instances to Subscription instances each time.

Procedure

1. Log on to the ECS console.
2. In the left-side navigation pane, choose Instances & Images > Instances.
3. In the top navigation bar, select a region.
4. Select one or more Pay-As-You-Go instances. Click Switch to Subscription under the instance list.
5. On the Switch to Subscription page, click Batch Change.
6. In the dialog box that appears, set the subscription plan, including:
   a) Duration: You can set the length of service time for the Subscription instance.
      Instances whose billing methods are converted at the same time must have the same length of service time.
   b) Data disk: If Pay-As-You-Go data disks are attached to the selected instances, you can set whether to also switch their billing method to Subscription.
7. Click OK.
8. Complete the payment as prompted.
8 Switch the billing method from Subscription to Pay-As-You-Go

This topic describes how to switch the billing method from Subscription to Pay-As-You-Go. After you create a Subscription instance, you can convert its billing method to Pay-As-You-Go if you want to pay only for the actual usage of your resources.

Prerequisites

The instance whose billing method is to be switched is in the Running or Stopped state.

Context

Whether you can convert the billing method is determined by your ECS instance resource usage.

Before converting the billing method, note that:

- The billing method conversion applies to the following resources:
  - System disk
  - The Subscription data disks created for the instance when the instance is created
  - Manually created Subscription disks for the instance after the instance is created
- The billing method of public bandwidth is unchanged.
- After the billing method is converted, the duration of usage offered for reasons such as the ICP filing, failure, or IDC migration is automatically invalidated.

The conversion of the billing method may result in a refund. Note that:

- Each account is limited by a maximum monthly refund amount. For more information, see the conversion page. If the monthly limit is reached, you cannot claim additional refunds. The remaining amount will be automatically cleared on the first day of the next month.

To calculate the refund amount resulting from billing method conversion, the calculation uses the number of vCPUs and the remaining hours in the current billing cycle. For example, 1 refund unit = 1 vCPU × 1 hour.

Assume that you have purchased a Subscription instance with four vCPUs for six months. Four months later, you convert the billing method to Pay-As-You-Go. In this case, the refund amount for this instance is calculated based on the formula: Refund amount = 4 (vCPUs) × 60 (remaining days) × 24 (hours/day) = 5760 (refund amount).
Elastic Compute Service

Pricing / 8 Switch the billing method from Subscription to Pay-As-You-Go

- If the instance involves renewal or upgrade orders that have not taken effect, a full refund will be made. If orders have already taken effect, only a partial refund will be made.

After conversion, make sure your account has sufficient funds to pay the bill. Otherwise, overdue payments will affect the running of your services. If you no longer require the instance, you can set it to auto release or release it manually. For more information, see #unique_19.

Procedure

1. Log on to the ECS console.
2. In the left-side navigation pane, choose Instances & Images > Instances.
3. In the top navigation bar, select a region.
4. Find the relevant instance. In the Actions column, choose More > Configuration Change > Switch to Pay-As-You-Go.
5. On the conversion page, read the notes and confirm you agree to the ECS Terms of Service.
6. Click Switch.

Result

After the billing method is converted, you can go to the ECS console to view the billing method of the instance:

- On the Instances page, the Billing Method has been changed to Pay-As-You-Go.
- Click the instance ID to go to the Instance Details page. In the left-side navigation pane, click Disks. The Billing Method of the system disk and data disks (if any) of the instance have changed to Pay-As-You-Go.
9 Change the billing method of a subscription disk

You can use the downgrade feature to change the billing method of a disk from subscription to pay-as-you-go.

Prerequisites

- The billing method of a subscription disk can be changed to pay-as-you-go only when it is used as a data disk.
- The subscription instance to which the subscription disk is attached is in the Running or Stopped state.

Context

The downgrade feature has the following limits:

- Whether this feature is supported depends on your ECS usage.
- The configurations of only one subscription instance can be downgraded at a time.
- The interval between two consecutive downgrade operations must be at least 5 minutes.

A configuration downgrade may result in a refund. The refund amount is the calculation result of the following formula: Refund amount = Price of the new configurations - Remaining amount of the purchase price before the downgrade.

Note:

A maximum of three refunds can be made for each instance, including refunds incurred when you downgrade the instance type, downgrade the public bandwidth, or convert subscription disks to pay-as-you-go disks.

Procedure

1. Log on to the ECS console.
2. In the left-side navigation pane, choose Instances & Images > Instances.
3. In the top navigation bar, select a region.
4. Find the target instance and click Upgrade/Downgrade in the Actions column.
5. In the Upgrade/Downgrade Wizard dialog box, choose Configuration Downgrade > Disk charge type to pay-as-you-go, and click Continue.
6. Select a disk and confirm the refund amount.
7. Select ECS Service Terms and click **Downgrade Now**.

**Result**

By default, after the billing method of a disk is changed to pay-as-you-go, the disk is not released together when its attached instance is released. You can configure whether the disk is released with its attached instance in the ECS console. For more information, see [#unique_58].

**Related topics**

[#unique_59]
10 Snapshot billing methods

ECS snapshots can be billed on a pay-as-you-go basis. You are billed only after you create a snapshot.

**Pay-as-you-go**

A pay-as-you-go snapshot is billed based on the size of the storage space occupied by the snapshot and the storage duration.

<table>
<thead>
<tr>
<th>Snapshot size</th>
<th>Storage duration</th>
<th>Unit price</th>
<th>Pay-as-you-go bill</th>
</tr>
</thead>
</table>

- **Snapshot size**

  The billing item of a pay-as-you-go snapshot. Unit: GiB.

  The snapshot size is defined as the difference between the amount of storage space used by the current snapshot and that used by the last snapshot. You have a free storage quota of 5 GiB each month. Alibaba Cloud identifies disk space that has never been written to and marks it as an empty block to reduce the amount of space for which you are billed. Therefore, the size of a single incremental snapshot is smaller than the disk size. For more information, see #unique_60.

- **Snapshot storage duration**

  The number of hours from the time when a snapshot is created to the time when it is deleted. Alibaba Cloud updates billing data and bills pay-as-you-go resources every hour. At the time of billing, you are billed for an entire hour even if your snapshot is stored for less an hour.

- **Snapshot unit price**

  The price per GiB for snapshot storage is the same as that for the OSS Standard storage class and is billed on a monthly basis. For a list of snapshot prices by Alibaba Cloud region, click the Pricing tab on the Elastic Compute Service page. Scroll down to the **Snapshot Fee** section to view the price list based on the region. You can also download
the list of snapshot prices by Alibaba Cloud region in CSV or JSON format by clicking

**Download price.**

<table>
<thead>
<tr>
<th>Region</th>
<th>Pay As You Go</th>
</tr>
</thead>
<tbody>
<tr>
<td>China North 1 (Hangzhou)</td>
<td>Free</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Capacity range</th>
<th>Pay As You Go</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Storage</td>
<td>0-5 GiB</td>
<td>Free</td>
</tr>
<tr>
<td>Standard Storage</td>
<td>&gt;5 GiB</td>
<td>USD 0.0200/GiB/month</td>
</tr>
</tbody>
</table>

**Example of pay-as-you-go snapshot billing**

One day Alex created three snapshots that were 50, 220, and 40 GiB in size in the China (Hangzhou) region for the first time at 10:20. The fees for the three snapshots during the period from 10:20 to 11:00 are calculated as follows:

- **Snapshot size:** $50 \text{ GiB} + 220 \text{ GiB} + 40 \text{ GiB} = 310 \text{ GiB}$.
- **Snapshot storage duration:** The duration from 10:20 to 11:00 is less than an hour but it is billed as a full hour.
- **Snapshot unit price:** In this example, assume that the price for a snapshot in the China (Hangzhou) region is USD 0.0200/GiB/month, which is equivalent to USD 0.0000277778/GiB/hour.

After the free storage quota of 5 GiB per month is deducted, Alex needs to pay the following snapshot fee: $(310 - 5) \text{ GiB} \times USD 0.0000277778/\text{GiB/hour} \times 1 \text{ hour} = USD 0.008472$.

- **The actual payable amount shown on the billing page is USD 0.008.**
- **However, the billing history records it as USD 0.0085.**

**Overdue payments**

If your payment account balance in the current billing cycle is less than the payable amount of the previous billing cycle, the system sends an SMS or email notification. The snapshot service is suspended 24 hours after the bill becomes overdue. From the day the bill becomes overdue:

- **In the first 15 days,** all existing snapshots are retained, but no snapshots can be created. All automatic snapshots whose retention period is less than 15 days are deleted.
- **After 15 days,** all snapshots are deleted, except for those that have been used to create disks or custom images. The automatic snapshot policy is also deleted.
References

- #unique_61
- #unique_62
- #unique_63
11 Billing methods of public bandwidth

This topic describes public bandwidth types, billing methods, and examples on how to calculate bandwidth fees.

Types of public IP addresses

An ECS instance can access the Internet by using the following types of public IP addresses:

- Fixed public IP address

  To use an allocated public IP address to access the Internet, select Assign Public IP Address when you configure the public bandwidth during instance creation. For more information, see #unique_52.

- Elastic IP address (EIP)

  An EIP is a public IP address resource that you can purchase and use independently. It provides higher flexibility for Internet access. For more information about the differences between EIPs and fixed public IP addresses and the billing methods of EIPs, see #unique_64.

  To use an EIP to access the Internet, attach the purchased EIP to an ECS instance. When you configure the public bandwidth, you do not need to select Assign Public IP Address to purchase public bandwidth.

Public bandwidth types

After an ECS instance is assigned a fixed public IP address, you can use the instance to access the Internet and process requests from the Internet. Two types of public bandwidth are used.

<table>
<thead>
<tr>
<th>Public bandwidth type</th>
<th>Charged</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outbound bandwidth</td>
<td>Yes</td>
<td>Bandwidth for outbound traffic from ECS instances</td>
<td>The FTP client downloads resources from ECS instances through public IP addresses.</td>
</tr>
<tr>
<td>Inbound bandwidth</td>
<td>No</td>
<td>Bandwidth for inbound traffic to ECS instances</td>
<td>The FTP client uploads resources to ECS instances through public IP addresses.</td>
</tr>
</tbody>
</table>
For more information about the limits on the public bandwidth of ECS instances, see Limits.

Note:
Alibaba Cloud does not charge any fees for internal bandwidth usage. Within the same region, no fees are charged for traffic between ECS instances or between ECS instances and other Alibaba Cloud services. For example, communication between Alibaba Cloud services that belong to the same VPC is free. If an ECS instance communicates with other Alibaba Cloud services through the Internet, the outbound bandwidth will be billed. For example, you will be billed for communication between an instance from China (Hangzhou) and an instance from China (Shanghai).

Billing methods

Billing methods of public bandwidth include pay-by-bandwidth and pay-by-traffic. Pricing of network bandwidth varies among regions. For more information, see Pricing.

Note:
You can also purchase a data transfer plan to offset the network traffic. For more information, see Purchase a data transfer plan with one click.

• Pay-by-bandwidth: Fees are charged based on the bandwidth that you specify. Your actual outbound bandwidth will not exceed the specified bandwidth.
• Pay-by-traffic: Fees are charged based on your actual traffic usage in the unit of USD/GB. You can configure a bandwidth limit for outbound traffic to avoid unmanageable fees incurred by outbound traffic bursts.

Billing examples

The following table describes how public bandwidth is billed on a pay-by-traffic basis. This example uses the China (Hangzhou) region.

Note:
The unit price here is for reference only. Visit the Pricing page for price details.
<table>
<thead>
<tr>
<th>Bandwidth billing method</th>
<th>Billing example</th>
<th>Fee (USD)</th>
</tr>
</thead>
</table>
| Pay-by-traffic           | This example assumes that the bandwidth is 0.5 Mbit/s.  
  - Usage period: 1 hour  
  - Average bandwidth: 0.5 Mbit/s  
  - Unit price: USD 0.1/GB | The volume of the outbound traffic is \(0.5 \times 60 \times \frac{60}{1024/8} \text{GB} = 0.22 \text{GB} \).  
  
  **Note:**  
  In this formula, 1024 is used to convert Mbit into Gbit, and 8 is used to convert Gbit into GB.  
  You must pay the following amount for the hourly traffic:  
  \(0.22 \text{GB} \times 0.1 \text{USD/GB} = \text{USD 0.022} \). | |

View billing details

To view the volume of outbound Internet traffic for a pay-as-you-go ECS instance, you can go to the Billing Management console and click **Usage Records** to download the usage history of Elastic Compute Service (ECS) - Pay-As-You-Go.
Change billing methods

You must use different methods to change the billing method of public bandwidth based on how an ECS instance is billed.

<table>
<thead>
<tr>
<th>Instance billing method</th>
<th>Conversion of the billing method</th>
<th>Method</th>
<th>Effective time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscription</td>
<td>From pay-by-traffic to pay-by-bandwidth</td>
<td>#unique_20</td>
<td>Immediately</td>
</tr>
<tr>
<td></td>
<td>From pay-by-bandwidth to pay-by-traffic</td>
<td>#unique_66</td>
<td>Immediately</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Downgrade an instance during renewal</td>
<td>From the next billing cycle</td>
</tr>
<tr>
<td>Pay-as-you-go</td>
<td>From pay-by-traffic to pay-by-bandwidth</td>
<td>#unique_24</td>
<td>Immediately</td>
</tr>
<tr>
<td></td>
<td>From pay-by-bandwidth to pay-by-traffic</td>
<td>#unique_24</td>
<td>Immediately</td>
</tr>
</tbody>
</table>
12 Reserved instance billing

Reserved instances have their separate billing methods. This topic describes the billing methods and billing rules of reserved instances.

Billing methods

The following table lists the billing methods supported by reserved instances.

<table>
<thead>
<tr>
<th>Item</th>
<th>All upfront</th>
<th>Partial upfront</th>
<th>Zero upfront</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualification</td>
<td>No qualification limits. You can purchase reserved instances if you have an Alibaba Cloud account.</td>
<td>No qualification limits. You can purchase reserved instances if you have an Alibaba Cloud account.</td>
<td>The availability of the zero upfront method depends on your ECS usage.</td>
</tr>
<tr>
<td>Billing method</td>
<td>Full payment is required upfront. No other fees are charged within the validity period.</td>
<td>Partial payment is required upfront. An hourly fee is charged within the validity period.</td>
<td>No upfront payment is required. An hourly fee is charged within the validity period.</td>
</tr>
<tr>
<td>Upfront payment</td>
<td>The upfront payment is deducted in a single transaction. The specific amount is subject to the specifications you selected on the purchase page.</td>
<td>The upfront payment is deducted in a single transaction. The specific amount is subject to the specifications you selected on the purchase page.</td>
<td>No upfront payment.</td>
</tr>
</tbody>
</table>
### Table: Reserved Instance Billing

<table>
<thead>
<tr>
<th>Item</th>
<th>All upfront</th>
<th>Partial upfront</th>
<th>Zero upfront</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hourly fee</td>
<td>No hourly fee is charged.</td>
<td>Reserved instances are charged for each second, billed every hour, and paid for every month. The specific hourly rate is subject to the specifications you selected on the purchase page. If the payable amount has reached USD 1,000, the amount will be automatically deducted from your account. Any amount less than USD 1,000 is deferred to the monthly bill.</td>
<td>Reserved instances are charged for each second, billed every hour, and paid for every month. The specific hourly rate is subject to the specifications you selected on the purchase page. If the payable amount has reached USD 1,000, the amount will be automatically deducted from your account. Any amount less than USD 1,000 is deferred to the monthly bill.</td>
</tr>
</tbody>
</table>

### Billing rules

The validity period of the reserved instance starts immediately after your purchase. You are charged based on the payment method that you selected regardless of whether pay-as-you-go instances are matched. Selecting the all upfront method can save you the most money.

The reserved instance takes effect and is billed from the top of the hour during which it is purchased. It expires at 00:00:00 on the day after the expiration date. For example, if you purchase a one-year reserved instance at 2019-02-26 13:45:00, the reserved instance takes effect and is billed starting at 2019-02-26 13:00:00 and is set to expire at 2020-02-27 00:00:00. If you purchase a reserved instance that matches your existing pay-as-you-go
instances, the discount is applied to the bills generated for the pay-as-you-go instances starting from 13:00 to 14:00 on February 26, 2019 until the reserved instance expires.
13 Pricing FAQ

This topic provides answers to FAQ about ECS pricing.

• Account FAQ
  - Why can't I purchase pay-as-you-go instances?
  - How are invoices issued for my pay-as-you-go instances?

• Refund FAQ
  - How do I calculate the refund amount if I immediately downgrade instances?
  - Why is the actual refund amount lower than the expected amount?
• Instance billing FAQ
  
  - Billing of subscription instances
    ■ What can I do if the billing method cannot be changed from subscription to pay-as-you-go?
  
  - Billing of pay-as-you-go instances
    ■ How is the billable time of a pay-as-you-go instance calculated? For example, if I create a pay-as-you-go ECS instance at 01:30:00 and release it at 02:00:00, is the instance billed for half an hour or an hour?
    ■ Are fees still incurred after a pay-as-you-go instance is automatically stopped due to an overdue payment or is manually stopped?
    ■ What can I do if an order to change the billing method from pay-as-you-go to subscription cannot be placed?
    ■ How long after the order is paid does it take to change the billing method from pay-as-you-go to subscription?
    ■ What can I do if the billing method cannot be changed from pay-as-you-go to subscription?
    ■ When I change the billing method of an instance from pay-as-you-go to subscription, will the billing method of the instance bandwidth change?
    ■ I have an unpaid order to change the billing method of an instance from pay-as-you-go to subscription. If I upgrade the instance, will the order still be valid?
    ■ Why can't I convert a pay-as-you-go instance to a subscription one?
  
  - No Fees for Stopped Instances (VPC-Connected) feature
    ■ To which types of ECS instances is the No Fees for Stopped Instances (VPC-Connected) feature applicable?
    ■ Can I retain the computing and network resources of a stopped ECS instance after I enable the No Fees for Stopped Instances (VPC-Connected) feature?
    ■ Can ECS instances for which the OS is stopped enter the No Fees for Stopped Instances state?
    ■ Can ECS instances that use local disks enter the No Fees for Stopped Instances state?
    ■ When I start an instance immediately after it enters the No Fees for Stopped Instances state, the OperationConflict error is reported. Why?
When I call the StartInstance operation to start an instance in the No Fees for Stopped Instances state, the OperationDenied.NoStock error is reported. Why?

I have set Stop Mode to No Charges After Instance Is Stopped when stopping an instance. When I start this instance again, its public IP address changes. How do I keep the IP address from changing?

- Instance billing

Can I release ECS instances on my own?

When I try to change the billing method of a disk in an ECS instance, an error message appears indicating that I have already changed the billing method of the disk three times. What does this mean?

Why has a pay-as-you-go bill been generated for my instance? What are the fees on the bill?

Why can’t I convert my pay-as-you-go instances into subscription instances?

Why can’t I convert my subscription instances into pay-as-you-go instances?
• Image billing

  - Billing of public images
    ■ Do I need to pay for Red Hat images used to create ECS instances?
    ■ How are Windows licenses billed? Are they billed based on countries and the numbers of cores?

  - Billing of custom images
    ■ How am I charged when I copy a custom image?
    ■ I am creating an ECS instance. Why is the total instance cost displayed when I select a custom image higher than that displayed when I select a public image?

  - Billing of Alibaba Cloud Marketplace images
    ■ Are Alibaba Cloud Marketplace images refundable?
    ■ Since Alibaba Cloud Marketplace images have been commercialized, are there still any free Alibaba Cloud Marketplace images available?
    ■ My ECS instance was created from an Alibaba Cloud Marketplace image. Do I need to make further payments when I upgrade or renew the instance?
    ■ My ECS instance was created from an Alibaba Cloud Marketplace image. After this instance is released, can I continue to use that image for free when I purchase a new ECS instance?
    ■ I created an ECS instance from an Alibaba Cloud Marketplace image and then created a custom image from the instance. Do I need to pay for the custom image when I use it to create a new ECS instance?
    ■ If I copy an image that derives from Alibaba Cloud Marketplace image to another region to create an ECS instance, do I need to pay for the image?
    ■ If I share a custom image that derives from Alibaba Cloud Marketplace image to Account B, does Account B need to pay for this custom image when using it to create an ECS instance?
    ■ Is a fee charged if I replace a system disk by using an Alibaba Cloud Marketplace image or an image that derives from an Alibaba Cloud Marketplace image?
    ■ My ECS instance is using an Alibaba Cloud Marketplace image. Is a fee charged if I replace the system disk?

  - Billing of subscription Alibaba Cloud Marketplace images
    ■ What are yearly, monthly, and weekly subscription Alibaba Cloud Marketplace images?
In which ECS instances can subscription images be used?

How do I purchase a subscription image? Can I purchase it separately?

How do I pay for a subscription image?

Can I use a subscription image after it expires? How do I continue to use it?

Can I request a refund if I no longer need a subscription image after purchase?

How is the fee settled when a refund is made?

Can a subscription image be converted to a pay-as-you-go image?

Can I convert between a subscription image and an image of another type? How is the fee calculated?

Is a fee charged to create a custom image from a subscription image? How will created custom images be affected if their corresponding subscription images expire?

• Billing of Block Storage
  - How are enhanced SSDs billed?
  - How do I purchase a standard SSD? What are the pricing options for I/O optimized instances and standard SSDs?
  - How are independent pay-as-you-go data disks billed?

• Snapshot billing
  - The snapshots from which disks or custom images were created are retained for 15 days after a payment becomes overdue in my account. Will these snapshots continue to incur fees, adding to the amount of the overdue payment?
Network billing

- How is the public bandwidth of ECS instances billed?
- How are the internal traffic and public traffic generated by pay-as-you-go instances billed?
- What is the difference between pay-by-bandwidth and pay-by-traffic?
- How do I set an appropriate peak bandwidth for outbound public traffic when I select pay-by-traffic as the bandwidth billing method?
- Can I adjust the set peak bandwidth?
- Will traffic generated by my ECS instances under attack incur fees?
- Pay-by-traffic billing of public bandwidth for subscription instances
  - Can I select the pay-by-traffic billing method for bandwidth when I purchase a subscription instance?
  - How is bandwidth billed when the pay-by-traffic billing method is used?
  - Can I change the bandwidth billing method from pay-by-bandwidth to pay-by-traffic for a subscription ECS instance?
  - Can I adjust the peak bandwidth for traffic for my ECS instance at any time?
  - I upgraded or downgraded my subscription instance when renewing it. During the renewal and upgrade or downgrade process, I changed its bandwidth billing method from pay-by-traffic to pay-by-bandwidth. Why is the public bandwidth service still stopped after the bandwidth billing method is changed?
  - If the pay-by-traffic billing method is used for the bandwidth of my subscription ECS instance, can I continue to use the public bandwidth service when a payment becomes overdue due to insufficient account balance?
  - If the pay-by-traffic billing method is used for the bandwidth of my subscription ECS instance, am I notified when a payment becomes overdue in my account?
  - If the pay-by-traffic billing method is used for the bandwidth of my subscription ECS instance, can I upgrade the instance after a payment becomes overdue in my account?
  - If the pay-by-traffic billing method is used for the bandwidth of my subscription ECS instance, is the public bandwidth service automatically resumed after I settle all overdue payments?
  - What is the traffic price after I change the bandwidth billing method of my subscription ECS instance from pay-by-bandwidth to pay-by-traffic?
Why can't I purchase pay-as-you-go instances?

You may be unable to purchase pay-as-you-go instances due to one of the following reasons:

- You have not passed real-name verification. To purchase ECS instances within a Mainland China region, you must pass real-name verification.
- The number of vCPUs that pay-as-you-go instances of your selected instance type will consume exceeds the vCPU quota of pay-as-you-go instances for your account.
- ECS instances of the selected instance type are unavailable for purchase in the selected region. Try again later or go to the ECS Instance Types Available for Each Region page to view instance types available in each region.

How are invoices issued for my pay-as-you-go instances?

You can apply for invoices for your pay-as-you-go instances. Only one invoice is provided based on your monthly statement for each month. Go to the Billing Management console to apply for invoices.

How do I calculate the refund amount if I immediately downgrade instances?

Your refund amount is calculated based on the price difference or price reduction ratio. If you purchase Alibaba Cloud instances by using US dollars, your refund amount is calculated based on the price difference. If you purchase Alibaba Cloud instances by using other currencies such as Malaysian ringgit (MYR) or Indian rupees (INR), your refund amount is calculated based on the price reduction ratio.

The remaining value of an instance is the residual value of an instance after the instance runs for a certain period. In Alibaba Cloud, the remaining value of an instance is calculated evenly over its lifecycle. If you want to release an instance, the remaining value of the instance is the refund amount that is provided by Alibaba Cloud. For example, you pay USD 30 to purchase a 30-day instance. After the instance runs for 10 days, the remaining value of the instance is USD 20. You will receive a refund amount of USD 20 if you release the instance.

Note:

- The instance lifecycle affects your refund amount regardless of the calculation method. After you downgrade an instance, the lifecycle of the instance remains the same as that before the downgrade.
• If the currency you used to upgrade your instance is different from the currency you used to purchase your instance, you are unable to immediately downgrade the instance.

If you purchase instances by using US dollars, your refund amount is calculated based on the price difference. Two examples are used to explain this calculation method.

• Example 1: You downgrade an instance during the lifecycle of an instance.

You purchase Instance A at a unit price of USD 1/day on the first day of a month. The lifecycle of this instance is 30 days, which means that you pay USD 30 in total. On the eleventh day of the month, you downgrade the instance. After the instance is downgraded, the unit price is USD 0.5/day. The refund amount is calculated as follows:

1. Calculate the remaining value of Instance A.
   
   Remaining value = USD 30 × (30 days - 10 days) / 30 days = USD 20

2. Calculate the fees incurred by the instance that has been downgraded.
   
   Fees incurred by the downgraded instance = USD 0.5/day × 20 days = USD 10

   Note that after Instance A is downgraded, its lifecycle remains the same as that before the downgrade. Before the downgrade, Instance A has run for 10 days. Therefore, the downgraded instance can only run for up to 20 days.

3. Calculate the refund amount.
   
   Refund amount = Remaining value - Fees incurred by the downgraded instance = USD 20 - USD 10 = USD 10

   In this example, your refund amount is USD 10.

• Example 2: You downgrade an instance after upgrading it during the lifecycle of the instance.

You purchase Instance B at a unit price of USD 1/day on the first day of a month. The lifecycle of this instance is 30 days, which means that you pay USD 30 in total. On the eleventh day of the month, you pay an additional cost to upgrade Instance B. After Instance B is upgraded, the unit price is USD 2/day. The upgrade cost is calculated based on the formula: Upgrade cost = (New unit price - Original unit price) × (Instance lifecycle - Running time) = (USD 2/day - 1 USD/day) × (30 days - 10 days) = USD 20.

On the twenty-first day of the month, you downgrade the instance. After Instance B is
downgraded, the unit price is USD 0.5/day. In this case, the refund amount is calculated as follows:

1. Calculate the remaining value of Instance B.

   The total remaining value consists of two parts: remaining value of Instance B before and after the upgrade.
   
   - (Before the upgrade) Remaining value 1 = USD 30 × (30 days - 20 days) / 30 days = USD 10
   - (After the upgrade) Remaining value 2 = USD 20 × (20 days - 10 days) / 20 days = USD 10

   Total remaining value = Remaining value 1 + Remaining value 2 = USD 20

2. Calculate the fees incurred by the instance that has been downgraded.

   Fees incurred by the downgraded instance = USD 0.5/day × 10 days = USD 5

   Note that after Instance B is downgraded, its lifecycle remains the same as that before the downgrade. Before the downgrade, Instance A has run for 20 days. Therefore, the downgraded instance can only run for up to 10 days.

3. Calculate the refund amount.

   Refund amount = Remaining value - Fees incurred by the downgraded instance = USD 20 - USD 5 = USD 15

   In this example, your refund amount is USD 15.

Two examples are used to explain how to calculate the refund amount based on the price reduction ratio.

If you use your local currency instead of US dollars to pay for your purchase order, the price of your purchase order is calculated based on the exchange rate between US dollars and your local currency. The actual price you pay depends on the exchange rate that is used when you make payments. Therefore, the remaining value of your instances is affected by the exchange rate. Unlike the calculation method mentioned above, this calculation method determines the refund amount based on the exchange rate that is used when you make payments. In this way, the refund amount is not affected by the exchange rate that is used when you downgrade the instance.
• Example 1: You downgrade an instance during the lifecycle of an instance.

You purchase Instance A at a unit price of USD 1/day on the first day of a month. The lifecycle of this instance is 30 days, which means that you need to pay USD 30 in total. On that day, the exchange rate between US dollars and Malaysian ringgit is 1:10, so the actual price you pay is MYR 300. On the eleventh day of the month, you downgrade the instance. After Instance A is downgraded, the unit price is USD 0.5/day. Your refund amount is calculated as follows:

1. Calculate the remaining value of Instance A.
   \[
   \text{Remaining value} = \text{MYR} \ 300 \times \frac{30 \text{ days} - 10 \text{ days}}{30 \text{ days}} = \text{MYR} 200
   \]
2. Calculate the price reduction ratio.
   \[
   \text{Price reduction ratio} = \frac{\text{USD} \ 1/\text{day} - \text{USD} 0.5/\text{day}}{\text{USD} \ 1/\text{day}} = 0.5
   \]
3. Calculate the refund amount.
   \[
   \text{Refund amount} = \text{Remaining value} \times \text{Price reduction ratio} = \text{MYR} 200 \times 0.5 = \text{MYR} \ 100
   \]

In this example, the refund amount is MYR 100. Your refund amount is not affected by the exchange rate that is used when you downgraded the instance.

• Example 2: You downgrade an instance after upgrading it during the lifecycle of the instance.

You purchase Instance B at a unit price of USD 1/day on the first day of a month. The lifecycle of this instance is 30 days, which means that you need to pay USD 30 in total. On that day, the exchange rate between US dollars and Malaysian ringgit is 1:10, so the actual price you pay is MYR 300. On the eleventh day of the month, you pay an additional cost to upgrade Instance B. After Instance B is upgraded, the unit price is USD 2/day. The exchange rate between Malaysian ringgit and US dollars is 11:1 when Instance B is upgraded. The upgrade cost is calculated based on the formula: Upgrade cost = (New unit price - Original unit price) \times (Instance lifecycle - Used time) \times Exchange rate between Malaysian ringgit and US dollars = (USD 2/day - 1 USD/day) \times (30 days - 10 days) \times 11 = \text{MYR} 220. On the twenty-first day of the month, you downgrade the instance.
After Instance B is downgraded, the unit price is USD 0.5/day. In this case, the refund amount is calculated as follows:

1. Calculate the remaining value of Instance B.

The total remaining value consists of two parts: remaining value of Instance B before and after the upgrade.

- (Before the upgrade) Remaining value 1 = USD 30 \times \left(\frac{30 \text{ days} - 20 \text{ days}}{30 \text{ days}}\right) \times 10 = MYR 100

- (After the upgrade) Remaining value 2 = USD 20 \times \left(\frac{20 \text{ days} - 10 \text{ days}}{20 \text{ days}}\right) \times 11 = MYR 110

Total remaining value = Remaining value 1 + Remaining value 2 = MYR 210

2. Calculate the price reduction ratio.

Price reduction ratio = \left(\frac{USD 2/\text{day} - USD 0.5/\text{day}}{USD 2/\text{day}}\right) = 0.75

3. Calculate the refund amount.

Refund amount = Remaining value \times Price reduction ratio = MYR 210 \times 0.75 = MYR 157.

In this example, your refund amount is MYR 157.5.

**Why is the actual refund amount lower than the expected amount?**

The potential reason is that you used a discount to purchase your instance or that the instance price has changed before you downgrade your instance.

For example, you purchase Instance A at a unit price of USD 1/day on the first day of a month. The lifecycle of this instance is 30 days. The exchange rate between US dollars and Malaysian ringgit is 1:10 when you purchase the instance. On the eleventh day of the month, you downgrade the instance. After the instance is downgraded, the unit price is USD 0.5/ day. Your refund amount is MYR 100.

However, if you used a discount to purchase Instance A or the price of Instance A has changed before you downgrade the instance, the refund amount is calculated based on the original unit price. If the original price is USD 0.7/day, your refund amount is calculated as follows:

1. Calculate the remaining value of Instance A.

  Remaining value = MYR 300 \times \left(\frac{30 \text{ days} - 10 \text{ days}}{30 \text{ days}}\right) = MYR 200
2. Calculate the price reduction ratio.

Price reduction ratio = (USD 0.7/day - USD 0.5/day) / USD 1/day = 0.2

3. Calculate the refund amount.

Refund amount = Remaining value × Price reduction ratio = MYR 200 × 0.2 = MYR 40

In this case, the actual refund amount is 40 MYR instead of 100 MYR.

What can I do if I am unable to change the billing method from subscription to pay-as-you-go?

You may be unable to change the billing method from subscription to pay-as-you-go due to one of the following reasons:

- The instance is in a state that does not support changes to the billing method.
- Changes to the billing method are not allowed because the instance is in the Expired state.
- Changes to the billing method are not allowed because the instance information has changed.

If one of the preceding errors is reported, adjust the instance accordingly. If the problem persists, submit a ticket.

How is the billable time of a pay-as-you-go instance calculated? For example, if I create a pay-as-you-go ECS instance at 01:30:00 and release it at 02:00:00, is the instance billed for half an hour or an hour?

Pay-as-you-go instances are billed on one second increments. Settlements are made every hour on the hour. The billable time of pay-as-you-go instances is automatically calculated. For example, if you create a pay-as-you-go instance at 01:30:00 and release it at 02:00:00, the hour from 01:00:00 to 02:00:00 is a billing cycle and the billable time is 1,800 seconds, which is calculated by using the following formula: (30 minutes) × 60 = 1800 seconds.

Will fees still be incurred after a pay-as-you-go ECS instance is automatically stopped due to an overdue payment or is manually stopped?

When a payment for a pay-as-you-go instance becomes overdue, the instance will be automatically stopped and taken out of service.

You can stop a running pay-as-you-go instance from the ECS console or by calling the StopInstance operation. When the instance is stopped, its status changes to Stopped. Billing of pay-as-you-go instances in the Stopped state depends on their network types.
• VPC: You can enable the No Fees for Stopped Instances (VPC-Connected) feature. After the feature is enabled, billing of pay-as-you-go instances within VPCs will start when the instances are created, stop when the instances enter the Stopped state, and resume when the instances are started again. When an ECS instance enters the Stopped state, the No Fees for Stopped Instances (VPC-Connected) feature stops only the vCPUs, memory, and public IP address of the instance from incurring fees. The data disks of the instance will continue to be billed. For more information, see No Fees for Stopped Instances (VPC-Connected).

• Classic network: ECS instances in classic networks will continue to be billed, even when they are in the Stopped state.

What can I do if I am unable to place an order to change the billing method from pay-as-you-go to subscription?

You may be unable to place the order due to one of the following reasons:

• The instance is in a state that does not support changes to the billing method.

• Changes to the billing method are not allowed due to an upcoming scheduled automatic release.

• Changes to the billing method are not allowed because the instance is in the Expired state.

• Changes to the billing method are not allowed because the instance information has changed.

• A previous order to change the billing method of the instance has not been paid.

If one of the preceding errors is reported, adjust the instance accordingly.

How long after the order is paid does it take to change the billing method from pay-as-you-go to subscription?

The billing method of your ECS instance will be changed after you pay for the order. It takes up to 4 seconds to change the billing method of 20 instances. After the change is completed, you can see that the billing method of your instance has been changed to Subscription in the console.

What can I do if I am unable to change the billing method from pay-as-you-go to subscription?

Submit a ticket.
When I change the billing method of an instance from pay-as-you-go to subscription, will the billing method for network usage of the instance change?

No, the billing method for network usage of the instance will not change. Only the billing method of instances and disks can be changed from pay-as-you-go to subscription. For information about how to change the billing method for network usage, see #unique_29/unique_29_Connect_42_ChangeBilling.

I have an unpaid order to change the billing method of an instance from pay-as-you-go to subscription. If I upgrade the instance, will the order still be valid?

The existing order is created when you change the billing method of your instance from pay-as-you-go to subscription. You must complete the payment for this order to complete the change. If you upgrade the instance before the order is paid for, the order payment cannot be completed because the instance components are different and the original order no longer matches. If you still want to change the billing method, you must cancel the unpaid order and place a new order.

Why can't I change a pay-as-you-go instance to a subscription one?

The ECS instance for which you want to change the billing method must meet the following requirements:

- The instance belongs to your account.
- The following instance types are not applicable:
  - Generation I: t1, s1, s2, s3, m1, m2, c1, or c2
  - Generation n1, n2, or e3

Note:
For more information about these instance types, see #unique_56.

- The instance cannot be a preemptible instance.
- There is no unpaid switch order for the instance.

If there is an unpaid switch order, you must cancel the unpaid order and then place another order to switch the billing method.
- Auto release is not set for the instance.

If auto release has been set for an instance, you must disable the auto release configuration and then switch the billing method. For more information, see #unique_19.
- The instance is in the Running or Stopped state.

Example: An order to switch the billing method has been placed when the ECS instance is in the Running or Stopped state. However, the instance status has changed when payment is attempted for the order. The preceding requirement is not met. The order fails and the billing method remains unchanged. You can go to the billing center and pay for the order when the instance is in the Running or Stopped state again.

To which types of ECS instances is the No Fees for Stopped Instances (VPC-Connected) feature applicable?

The No Fees for Stopped Instances (VPC-Connected) feature is applicable to ECS instances that meet the following requirements:

- The network type of the instances is VPC.
- The instances use the pay-as-you-go billing method.
- The instances do not use local disks.

For more information, see No Fees for Stopped Instances (VPC-Connected).

Can I retain the computing and network resources of a stopped ECS instance after I enable the No Fees for Stopped Instances (VPC-Connected) feature?

With the No Fees for Stopped Instances (VPC-Connected) feature enabled, you can configure whether an instance enters the No Fees for Stopped Instances state by setting the Stop Mode parameter when you stop the instance. If the instance does not enter the No Fees for Stopped Instances state after it is stopped, its computing and network resources are not released.
If you need to stop and then restart an instance within the span of a few minutes, we recommend that you configure the instance not to enter the No Fees for Stopped Instances state by performing one of the following operations: call the StopInstance operation with StoppedMode set to KeepCharging, or select Retain Instance and Continue Charging After Instance Is Stopped in the Stop Instance dialog box in the ECS console.

**Can ECS instances for which the OS is stopped enter the No Fees for Stopped Instances state?**

No, ECS instances for which the OS is stopped cannot enter the No Fees for Stopped Instances state. Only ECS instances that are stopped in one of the following methods can enter the No Fees for Stopped Instances state:

- By using the ECS console
- By using ECS API

**Can ECS instances that use local disks enter the No Fees for Stopped Instances state?**

No, ECS instances that use local disks cannot enter the No Fees for Stopped Instances state.

**When I start an instance immediately after it enters the No Fees for Stopped Instances state, the OperationConflict error is reported. Why?**

When an instance enters the No Fees for Stopped Instances state, its computing resources are recycled. If you need to stop and then restart an instance within the span of a few minutes, we recommend that you set StoppedMode to KeepCharging to disallow the instance from entering the No Fees for Stopped Instances state.

**When I call the StartInstance operation to start an instance in the No Fees for Stopped Instances state, the OperationDenied.NoStock error is reported. Why?**

When an instance enters the No Fees for Stopped Instances state, its computing resources are recycled. If ECS instance resources are insufficient, the OperationDenied.NoStock error is reported when you attempt to start the instance. We recommend that you try again later.

**I have set Stop Mode to No Charges After Instance Is Stopped when stopping an instance. When I start this instance again, its public IP address changes. How do I keep the IP address from changing?**

When an instance enters the No Fees for Stopped Instances state, its public IP address is released. When the instance is started again, it is assigned a new public IP address.
To retain the original public IP address of the instance, you can convert the IP address to an Elastic IP Address (EIP) before you stop the instance. For more information, see #unique_37 and ConvertNatPublicIpToEip.

**Notice:**
After the IP address is converted to an EIP, you will be charged for the EIP while the instance is in the No Fees for Stopped Instances state. For more information, see Billing method of the EIP documentation.

**Can I release ECS instances on my own?**

Yes, you can manually release or schedule the automatic release of pay-as-you-go instances, but you cannot release subscription instances on your own.

If you have further questions, submit a ticket.

**When I try to change the billing method of a disk in an ECS instance, an error message is returned indicating that I have already changed the billing method three times. What does this mean?**

Each ECS instance can be downgraded a maximum of three times. Downgrade operations include instance specifications downgrades, bandwidth downgrades, and the change of the disk billing method from subscription to pay-as-you-go.

**Why has a pay-as-you-go bill been generated for my instance? What are the fees on the bill?**

You can copy your instance ID and perform the following steps to view the bill details:

1. Log on to the ECS console.
2. In the top navigation bar, choose Billing > User Center.
3. In the left-side navigation pane, choose Spending Summary > Instance Spending Detail.
4. Set the search criteria.
Why can't I convert my pay-as-you-go instances into subscription instances?

Pay-as-you-go instances of the following instance types cannot be converted into subscription instances:

- Instance types of Generation One: t1, s1, s2, s3, m1, m2, c1, and c2.
- Instance types in the n1, n2, and e3 instance families.

Note:
For more information about the preceding instance types, see #unique_56.

If your pay-as-you-go instances are not of the preceding instance types, ensure that your pay-as-you-go instances meet the requirements to convert the billing method to subscription. For more information, see Switch the billing method from Pay-As-You-Go to Subscription.

Why can't I convert my subscription instances into pay-as-you-go instances?

Whether subscription instances can be converted to pay-as-you-go instances depends on the instance usage. Before converting subscription instances, ensure that they are in the Running or Stopped state.

Do I need to pay for Red Hat images used to create ECS instances?

Yes, you must pay for Red Hat images used to create ECS instances. Red Hat images are paid images. For pricing details, visit the ECS pricing page.

How are Windows licenses billed? Are they billed based on countries and the numbers of cores?

Windows licenses are free of charge within Mainland China but will be charged outside Mainland China. The charges for Windows licenses vary with countries, regions, and the numbers of vCPUs. For pricing details, visit the ECS pricing page.

How am I charged when I copy a custom image?

You must perform the following operations to copy a custom image:

1. Copy the snapshot from which the custom image is created from the source region to the destination region.
2. Create a custom image from the snapshot in the destination region.

The preceding operations may incur the following fees:
• Fees for traffic between the two regions. Alibaba Cloud has not started charging for cross-region traffic. For the latest billing details, see the official Alibaba Cloud website for announcements.

• The copied snapshot consumes snapshot capacity. For the latest snapshot billing details, see the official Alibaba Cloud website for announcements.

I am creating an ECS instance. Why is the total instance cost displayed when I select a custom image higher than that displayed when I select a public image?

This situation may occur in the following circumstances:

• The custom image contains data disks. When such an image is selected, the costs of the data disks cause the total cost of the instance to be higher than that of an instance created by using a public image.

• The custom image is created from a paid public image such as Windows Server or Red Hat Enterprise Linux (RHEL).

Are Alibaba Cloud Marketplace images refundable?

Alibaba Cloud Marketplace images support money-back guarantee refunds within a certain period of time based on the Alibaba Cloud Marketplace rules. However, you will not receive a refund in the following situations:

• You have deployed the purchased image to an ECS instance within the money-back guarantee period.

• You have deployed the purchased image to an ECS instance before your application for a refund for this image is approved.

• You can receive refunds only for images that have not been used.

Will any free Alibaba Cloud Marketplace images be available after Alibaba Cloud Marketplace images are commercialized?

A certain number of free Alibaba Cloud Marketplace images are still available. However, you must them to your purchase at USD 0.00 before you can use them.

My ECS instance is created from an Alibaba Cloud Marketplace image. Do I need to make further payments when I upgrade or renew my ECS instance?

No. You do not need to make any further payments. You can use a purchased image to create as many instances as you like.
My ECS instance is created from an Alibaba Cloud Marketplace image. After my ECS instance is released, can I continue to use that image free of charge when I purchase a new ECS instance?

Yes.

I created an ECS instance from an Alibaba Cloud Marketplace image and then created a custom image from the instance. Do I need to pay for the custom image when I use it to create an ECS instance?

Yes. You must pay the original price of the Alibaba Cloud Marketplace image.

If I copy an Alibaba Cloud Marketplace image that I bought to another region to create an ECS instance, do I need to pay for the image?

Yes. You must pay the original price of the Alibaba Cloud Marketplace image.

I created an ECS instance from an Alibaba Cloud Marketplace image and then created a custom image from that instance. If I share the custom image to Account B, does Account B need to pay for the custom image when it uses the image to create an ECS instance?

Yes. Account B must pay the original price of the Alibaba Cloud Marketplace image.

Is a fee charged if I replace a system disk by using an Alibaba Cloud Marketplace image or an image that derives from an Alibaba Cloud Marketplace image?

It depends. If the current image of your ECS instance is a different version of the replacement image, no fees are charged. Otherwise, a fee is charged.

My ECS instance is using an Alibaba Cloud Marketplace image. Is a fee charged if I replace the system disk?

No.

What are yearly, monthly, and weekly subscription Alibaba Cloud Marketplace images?

Yearly, monthly, or weekly subscription Alibaba Cloud Marketplace images are images that are purchased from Alibaba Cloud Marketplace and billed on a recurring basis. These images are developed and maintained by image providers, who are responsible for both pre-sales consultation and after-sales services. In this topic, these images are collectively referred to as subscription images.

In which ECS instances can I use a subscription image?

A subscription image can only be used in a subscription instance with the same billing cycle.
How do I purchase a subscription image? Can I purchase it separately?

You cannot purchase a subscription image separately.

You can purchase a subscription image in either of the following ways:

• When you create an ECS instance, set Billing Method to Subscription, select an image from Alibaba Cloud Marketplace, and then set Duration.

  **Note:**
  Then, you must pay for both the instance and image. The instance is created upon successful payment for both the image and instance.

• If you want to use a subscription image in an existing subscription ECS instance, you can use this image to replace the operating system of the instance. In this case, you must set the image billing cycle to be the same as the instance billing cycle. For more information, see #unique_69.

  **Note:**
  In this case, you only need to pay for the image.

How do I pay for subscription images?

Subscription images require upfront payment. The billing cycle of a subscription image must be the same as that of the subscription instance in which the image is used.

Image prices are set by their providers.

Can I use a subscription image after it expires? How do I continue to use it?

When a subscription image expires, it cannot be used if it is not renewed in time.

You cannot renew a subscription image separately. If you want to continue using the image, you must renew the image with the corresponding ECS instance. You can resume use of the image after it is renewed.

After purchasing a subscription image, can I request a refund if I no longer want to use it?

The image provider will determine whether to make a refund. You can consult the image provider before your purchase the image.

What can I expect when a refund is made?

If a refund is available, the image provider will make the refund based on your usage.
Can a subscription image be converted to a pay-as-you-go image?

Subscription images cannot be converted to pay-as-you-go images. This function is currently under development for release in the future. Stay updated on the official Alibaba Cloud website.

Can I replace a subscription image with an image of another type or vice versa? How is the fee calculated?

Yes. You can replace images when you replace system disks of ECS instances. You can make the following replacements:

- Replace an image of another type (such as public image, custom image, and shared image) with a subscription image. After the image is replaced, the system will calculate the actual cost based on the image cost and the remaining billing cycle of the ECS instance.
- Replace a subscription image with an image of another type (such as public image, custom image, and shared image). If the image provider allows for refunds, a refund will be made based on your actual usage.
- Replace Subscription Image A with Subscription Image B. After the image is replaced, if a refund is available for Image A, the refund will be made based on the refund policy. The actual cost of Image B will be calculated based on the image price and the remaining billing cycle of the ECS instance.

Is a fee charged for creating a custom image from a subscription image? How will created custom images be affected if their corresponding subscription images expire?

When you use a custom image that is created from a subscription image to create an instance or replace a system disk, you are re-ordering the subscription image on Alibaba Cloud Marketplace. Therefore, the custom image is not affected by whether the original subscription image expires.

How are ESSDs billed?

ESSDs support both subscription and pay-as-you-go billing methods. For more information, visit the Pricing page.

How do I purchase a standard SSD? What are the pricing options for I/O optimized instances and standard SSDs?

For the pricing details, visit the Pricing page.
How is a separately purchased pay-as-you-go data disk billed?

A pay-as-you-go data disk is billed by the hour. Note that if your account balance is insufficient, the services of the data disk will be suspended.

The snapshots from which disks or custom images were created are retained for 15 days after a payment becomes overdue in my account. Will these snapshots continue to incur fees, adding to the amount of the overdue payment?

No, the snapshots will not continue to incur fees.

For example, your account has an overdue payment of CNY 0.1. After the 15 day retention period, snapshots that have not been used to create disks or custom images are deleted, but snapshots that have been used to create disks or custom images are retained and do not incur additional charges. When you use these retained snapshots, you do not need to pay for them again but must settle the overdue payment of CNY 0.1.

How is the Internet usage of ECS instances billed?

For more information, see Billing methods of public bandwidth.

How are the internal traffic and public traffic generated by pay-as-you-go instances billed?

Traffic between ECS instances or between ECS instances and other Alibaba Cloud services within the same local area network (LAN) is free of charge. Traffic between ECS instances and the public network is charged based on the following rules:

• Inbound traffic is free of charge. Inbound traffic refers to the traffic from the public network to ECS instances, such as traffic that occurs when you download resources from the public network to your ECS instances or when you upload resources to your ECS instances by using an FTP client.

• Outbound traffic is charged. Outbound traffic refers to the traffic from ECS instances to the public network, such as the traffic that occurs when your ECS instances provide external access or when you download internal resources of your ECS instances by using an FTP client.

For more information about bandwidth billing, see Billing methods of public bandwidth.

What is the difference between pay-by-bandwidth and pay-by-traffic?

If you select pay-by-bandwidth as the bandwidth billing method for your instance, you are billed based on the specified bandwidth for network usage. Your actual outbound bandwidth will not exceed the specified bandwidth.
If you select pay-by-traffic as the bandwidth billing method for your instance, you are billed based on the actual volume of outbound public traffic. To prevent traffic bursts from incurring unmanageable fees, you can set a peak bandwidth for outbound public traffic.

For more information, see Billing methods of public bandwidth.

**How do I set an appropriate peak bandwidth for outbound public traffic when I select pay-by-traffic as the bandwidth billing method?**

You can set the peak bandwidth based on your expected peak volume and adjust it as needed.

**Can I adjust the set peak bandwidth?**

Yes, you can adjust the set peak bandwidth. For more information, see #unique_29.

**Will traffic generated by my ECS instances under attack incur fees?**

Fees will not be incurred for the inbound public traffic generated by your ECS instance under attack, but will be incurred for the outbound public traffic.

We recommend that you use Alibaba Cloud Security services such as Server Guard to reinforce the security of your ECS instances.

**Can I select the pay-by-traffic billing method for bandwidth when I purchase a subscription instance?**

Yes, you can select the pay-by-traffic billing method for bandwidth when you purchase a subscription instance. For more information, see #unique_52.

For more information about pay-by-traffic billing of bandwidth, visit the Pricing page.

**How is bandwidth billed when the pay-by-traffic billing method is used?**

Pay-by-traffic is a pay-as-you-go billing method based on the volume of traffic. Payments are settled every hour on the hour. To keep the service running properly, ensure that your account balance is sufficient. To prevent traffic bursts from incurring unmanageable fees, you can set a peak bandwidth for traffic.

**Can I change the bandwidth billing method from pay-by-bandwidth to pay-by-traffic for a subscription ECS instance?**

Yes, you can change the bandwidth billing method from pay-by-bandwidth to pay-by-traffic by using the bandwidth downgrade feature. However, this feature can only be performed a limited number of times. For more information, see #unique_66.
You can also change the bandwidth billing method by using the renewal and upgrade or downgrade feature. The new configuration does not take effect until the next billing cycle. For more information, see Downgrade an instance during renewal.

Can I adjust the peak bandwidth for traffic for my ECS instance at any time?

You can adjust the peak bandwidth for traffic for your ECS instance by using the bandwidth downgrade feature at any time. After you set the peak bandwidth to a smaller value, the new value takes effect immediately. A maximum of three refunds can be made for each instance. Use caution when downgrading an instance.

If you have upgraded or downgraded a subscription instance when renewing it, you cannot upgrade or downgrade the instance again until the next billing cycle.

I upgraded or downgraded my subscription instance when renewing it. During the renewal and upgrade or downgrade process, I changed its bandwidth billing method from pay-by-traffic to pay-by-bandwidth. Why is the public bandwidth service still stopped after the bandwidth billing method is changed?

If you upgrade or downgrade your subscription instance when renewing it and change the billing method of public bandwidth during the renewal and upgrade or downgrade process, the new configuration does not take effect until the new billing cycle. Although you have paid for the new billing cycle, the pay-by-traffic public bandwidth service is stopped if your account has a payment overdue for the instance before the new billing cycle starts.

If an instance still has overdue payments, the public bandwidth service will remain stopped even after the new billing cycle starts. To keep the service running properly, ensure that your account balance is sufficient.

If the pay-by-traffic billing method is used for the bandwidth of my subscription ECS instance, can I continue to use the public bandwidth service when a payment becomes overdue due to insufficient account balance?

Overdue payments do not affect how subscription instances run, but the pay-by-traffic public bandwidth service is stopped, causing the ECS instance not to be able to access the public network. You can continue to use the public bandwidth service only after you settle the overdue payment. To keep the service running properly, ensure that your account balance is sufficient.
If the pay-by-traffic billing method is used for the bandwidth of my subscription ECS instance, am I notified when a payment becomes overdue in my account?

Yes, you will be notified by SMS. To keep the service running properly, ensure that your account balance is sufficient.

If the pay-by-traffic billing method is used for the bandwidth of my subscription ECS instance, can I upgrade the instance after a payment becomes overdue in my account?

No, you can upgrade your instance only after you settle the overdue payment.

If the pay-by-traffic billing method is used for the bandwidth of my subscription ECS instance, is the public bandwidth service automatically resumed after I settle all overdue payments?

If the public bandwidth service is stopped due to an overdue payment, it is automatically resumed when the overdue payment is settled.

What is the traffic price after I change the bandwidth billing method of my subscription ECS instance from pay-by-bandwidth to pay-by-traffic?

When you change the bandwidth billing method of your subscription instance from pay-by-bandwidth to pay-by-traffic, you are billed based on the volume of traffic, and payments are deducted every hour on the hour. For pricing details, visit the Pricing page.