

# Cloud Object Storage FAQs



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# FAQs

## Popular Questions

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### Billing and Metering Issues

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For more questions, see [Billing Issues](#).

### Domain and CDN Issues

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For more questions, see [Domain and CDN Issues](#).

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- [How to upload objects to COS?](#)
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For more questions, see [issues with file operations](#).

### Issues with Permission Management

- [How to handle COS exceptions in resource access?](#)
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For more questions, see [Issues with Permission Management](#).

### API/SDK Related Issues

- [How to use the API to upload local objects to a specified bucket?](#)
- [How to install and use the JavaScript SDK?](#)

For more questions, see [API Issues](#) and [SDK FAQs](#).

## Other Issues

- [How to activate COS?](#)
- [How to disable COS?](#)
- [How to use the self-diagnosis tool for COS?](#)
- [How to view the COS error code list?](#)
- [How to unblock COS after it has been blocked?](#)

For more questions, see [General Issues](#).

# Billing

Last updated: 2025-04-11 18:10:29

## Billing Mode

### How is COS billed?

COS supports two billing modes: pay-as-you-go (postpaid) and resource pack (prepaid). For more information, see [Billing Overview](#).

### What are the billable items of COS?

COS billable items include [storage usage](#), [requests](#), [data retrievals](#), [traffic](#), and [management features](#). For more information, see [Pricing | Cloud Object Storage](#).

### Can I change the billing mode of COS? How do I switch from pay-as-you-go billing to resource pack deduction mode?

You don't need to manually modify the billing mode of COS. If there are resource packs under your account, they will be used for deduction first; otherwise, pay-as-you-go billing will be adopted. For more information, see [Billing Overview](#).

- If there are valid COS resource packs under your account, they will be used for deduction first, that is, **resource pack (prepaid)** billing is used.
- If there are no available COS resource packs under your account, your account balance will be used for deduction by default, that is, **pay-as-you-go (postpaid)** billing is used.

### Can COS be billed by bandwidth?

No. COS supports only two billing modes: resource pack (prepaid) and pay-as-you-go (postpaid).

### How are COS request fees calculated?

Request fees are calculated based on the number of requests sent to COS, including **user requests** and **backend requests** generated after you configure a feature. For more information, see [Request Fees](#).

### What changes have been made to COS pricing?

On September 30, 2021, the published prices of COS were reduced as follows:

#### 1. Unit price of object tagging

- Product Pricing: Public cloud regions in the Chinese mainland are reduced to 0.00166667 CNY/10,000 tags/day, while Hong Kong and overseas regions are reduced to 0.002

CNY/10,000 tags/day.

- Billing cycle: Fees incurred between 00:00 and 23:59:59 on a day are settled the next day.
- Bill description: These prices have taken effect for bills generated starting from October 1, 2021 (i.e., fees incurred in September until September 30, 2021).

## 2. Unit price of DEEP ARCHIVE read/write requests

- Product Pricing: Public cloud regions in Chinese mainland, Hong Kong, and overseas are reduced to 0.5 CNY/10,000 times.
- Billing cycle: Fees incurred in a month are billed on the first day of the next month.
- Bill description: These prices have taken effect for bills generated starting from October 1, 2021 (i.e., fees incurred in September).

## Free Tier

### Does COS offer a free tier?

COS offers a limited free tier to all new users (both individual and enterprise users) to deduct the fees incurred by data stored in the **STANDARD storage class**. For more information, see [Free Tier](#).

### How do I check the free tier of COS?

You can view the current status of your free quota resource packs in the COS console by navigating to [Resource Pack Management > Free Quota Resource Packs](#). If the page is empty, it means there are no available free quota resource packs. You can check if the free quota has expired by visiting the [Expired Resource Packs](#) page.

### Does COS offer a free tier outside the Chinese mainland?

Yes. The free tier is applicable to **public cloud regions** (including regions outside the Chinese mainland), not to finance cloud regions. For more information on regions, see [Regions and Access Endpoints](#).

Based on the deductible [billing items](#), the free tier resource pack provided by COS can only be applied to **STANDARD storage** and cannot be applied to **non-STANDARD storage** billing items, such as Infrequent Access storage, Archive storage, request count, and traffic. For more information about billing items, please refer to the [Billing Items](#) documentation.

### Why is my account overdue or charged even if I am on the free tier?

The following are some of the possible reasons why your account has overdue payments if your free tier hasn't expired:

1. Multiple billable items are used, but the free tier is insufficient to deduct the fees of all the billable items:

- When you upload data to the STANDARD storage class, [storage usage fees](#) will be incurred, which can be deducted from the free tier offered by COS. COS provides multiple separately billed storage classes. The free tier of STANDARD cannot be applied to deduction of fees of other storage classes (such as STANDARD\_IA).
- In COS, if your data needs to be accessed or downloaded, it will incur [data traffic fees](#) and [data request fees](#). The free quota resource pack provided by COS does not cover these fees. You need to purchase **outbound traffic packs** and **data request packs** for deductions.
  - If you upload and download data between the COS bucket and CVM instance in the same region, the access is over the private network in the same region and doesn't incur traffic fees (cross-region private network access will incur cross-region traffic fees). If your data is downloaded to the local file system through the console, API, or COS tools, public network downstream traffic fees will be incurred.
  - COS offers multiple storage classes that generate different types of requests. For example, if STANDARD\_IA data is downloaded, STANDARD\_IA requests will be generated. Different types of requests cannot share the same request pack. Currently, only STANDARD and STANDARD\_IA request packs are available, and requests for other storage classes are pay-as-you-go only.
- If you use COS in conjunction with CDN/EdgeOne, you may incur CDN origin-pull traffic fees. You can purchase a **CDN Origin-Pull Traffic Package** for deductions. For information on the fees generated when using COS with CDN/EdgeOne, see [Traffic Generated When COS Serves as a CDN Origin Server](#).
- If you enable global acceleration, global acceleration fees will also be incurred, so you need to purchase a **global acceleration traffic pack** for deduction.

## 2. Excess resource usage fees:

For example, if COS grants you 50 GB of free STANDARD storage, but your actual data storage usage exceeds this limit and reaches 60 GB, the excess 10 GB will be billed on a pay-as-you-go basis, resulting in charges. You can resolve this situation by purchasing a storage capacity resource pack.

## 3. Free Quota Expiration:

COS offers a 6-month validity period of standard storage capacity free quota for first-time users. After the free quota expires, storage fees will be charged on a pay-as-you-go basis. You can log in to the COS console and go to [Resource Pack Management > Free Quota Resource Pack](#) to check the validity period of the free quota.

## Does the free tier apply to the INTELLIGENT TIERING storage class?

No. The free tier is applicable only to **STANDARD storage usage** but not **other billable items** such as STANDARD\_IA/ARCHIVE storage usage, requests, and traffic.

INTELLIGENT TIERING is an independent storage class and incurs INTELLIGENT TIERING storage usage fees, which cannot be deducted from the free tier for the STANDARD storage class. You can purchase an INTELLIGENT TIERING storage pack for deduction. For more information, see [Free Tier](#).

## Does COS offer a free tier for CDN usage?

No, COS and CDN/EdgeOne are two separate cloud products. COS does not offer free allowances for CDN/EdgeOne. The back-to-origin traffic generated when using CDN/EdgeOne is charged by COS, and you can purchase a [CDN Back-to-Origin Traffic Package](#) to offset usage or opt for pay-as-you-go billing. The CDN traffic fees are charged by the CDN cloud product. For an explanation of the differences between CDN/EdgeOne back-to-origin traffic and CDN traffic, see [Traffic Generated When COS Serves as a CDN Origin](#).

## Resource Pack

### What is a resource pack (prepaid)?

COS supports two billing modes: pay-as-you-go (postpaid) and resource pack (prepaid). A resource pack (prepaid) is more cost-saving than pay-as-you-go billing. For more information on the supported resource pack types, see [Resource Pack \(Prepaid\)](#).

### How do I purchase a resource pack?

You can purchase a resource pack as instructed in [Purchase Guide](#).

### Does the specification of a COS traffic pack refer to the monthly available amount or the total available amount for the validity period?

The specification of a traffic pack refers to the **monthly amount of traffic that can be deducted**. Fees for excess usage will be deducted from your account balance, and any amount of traffic not used in a month will not roll over to the next month. If you purchase two traffic packs with the same validity period, their specifications will be applied together every month, and fees for excess usage will be deducted from your account balance.

### Why does my account still have overdue payment or incur charges even if I purchased a storage pack?

Possible causes are as follows:

1. Multiple billable items are used, but the purchased types of resource packs are insufficient to deduct the usage of all the billable items:
  - After uploading your data to COS, [data storage fees](#) will be incurred, and you need to purchase **storage capacity packs** for deductions. COS offers various storage types, each with its corresponding storage capacity pack, which cannot be mixed between different

storage types. For example, STANDARD storage capacity packs cannot be used to deduct storage fees generated by STANDARD\_IA storage.

- In COS, if your data needs to be accessed or downloaded, [data traffic fees](#) and [data request fees](#) will be incurred. You need to purchase **public outbound traffic packs** and **data request packs** for deductions:
    - If you upload and download data between the COS bucket and CVM instance in the same region, the access is over the private network in the same region and doesn't incur traffic fees (cross-region private network access will incur cross-region traffic fees). If your data is downloaded to the local file system through the console, API, or COS tools, public network downstream traffic fees will be incurred.
    - COS offers multiple storage classes that generate different types of requests. For example, if STANDARD\_IA data is downloaded, STANDARD\_IA requests will be generated. Different types of requests cannot share the same request pack. Currently, only STANDARD and STANDARD\_IA request packs are available, and requests for other storage classes are pay-as-you-go only.
  - If you use COS in conjunction with CDN/EdgeOne, you may incur CDN origin-pull traffic fees. You can purchase a **CDN Origin-Pull Traffic Package** for deductions. For information on the fees generated when using COS with CDN/EdgeOne, see [Traffic Generated When COS Serves as a CDN Origin Server](#).
  - If you enable global acceleration, global acceleration fees will also be incurred, so you need to purchase a **global acceleration traffic pack** for deduction.
2. The region of the purchased resource pack is not the same as the region of your bucket, so the resource pack cannot be applied to deduction of fees:
- You need to select a region for a resource pack when purchasing it, and a resource pack purchased for one region cannot be used for another region. For example, if you purchased a STANDARD storage pack for regions in the Chinese mainland (excluding finance cloud regions), but your data is stored in a bucket in Singapore, the bucket in Singapore will incur fees separately, which cannot be deducted from the resource pack for regions in the Chinese mainland.
  - Currently, COS only provides resource packs for **regions in the Chinese mainland** and **regions outside the Chinese mainland**, and fees incurred by buckets in other regions (such as buckets in finance cloud regions) are still pay-as-you-go. For more information on regions, see [Regions and Access Endpoints](#).
3. Your data usage has exceeded the specifications of the purchased resource pack. For example, if you purchased a 100GB standard storage capacity pack but used 105GB, the additional 5GB will be billed on a pay-as-you-go basis, resulting in a charge. You can upgrade your resource pack to resolve this situation.

## Will my usage be automatically deducted from the purchased COS resource pack? Is any additional configuration required?

Starting from the selected effective date, your usage will be automatically deducted from the purchased COS resource pack, and no additional configuration is required.

## Will other resource packs under my account be automatically used after one expires?

Yes. After a resource pack expires or is used up, other available resource packs will be automatically used for deduction first with no configuration or data migration operation required. If there are no available resource packs, fees will be deducted from your account balance by default. If your account balance becomes negative, and you fail to top up your account promptly, the services will be suspended due to overdue payment.

## Can I use multiple COS storage packs together?

Yes. Multiple COS resource packs can be used together, but only their specifications can be combined, not their validity periods. For more information on how to purchase a resource pack as well as its validity period and effective scope, see [Resource Pack \(Prepaid\)](#).

## Do I need to purchase a CDN origin-pull traffic package if I have already purchased an outbound traffic package?

CDN/EdgeOne back-to-origin traffic is generated only when CDN is enabled and the CDN accelerated domain is used to access COS. Public outbound traffic does not include CDN/EdgeOne back-to-origin traffic. If you have enabled CDN acceleration, it is recommended to purchase a CDN back-to-origin traffic package.

## What is the difference between renewing an existing COS resource pack and purchasing a new one?

- **Renewing an existing COS resource pack** means extending the validity period of a resource pack. For example, if you purchased a public network downstream traffic pack of 50 GB with a validity period of three months and manually renewed it for three months, then its validity period would be extended by three months, during which you would get monthly traffic of 50 GB.
- **Purchasing a new COS resource pack** means purchasing a new and appropriate resource pack at [Pricing | Cloud Object Storage](#).

### Note

- A previously purchased resource pack whose price has changed (for example, price reduction) can no longer be renewed, so you need to purchase a new one.

- The **free** resource pack displayed on the resource pack management page cannot be renewed, so you need to purchase a new one.

## Why certain COS resource packs cannot be renewed or upgraded?

In the following circumstances, resource packs cannot be renewed or upgraded, and you can purchase new resource packs at [Pricing | Cloud Object Storage](#).

1. The **free** STANDARD storage pack offered to new users cannot be renewed or upgraded (the STANDARD storage pack of 50 GB or 1 TB for all regions displayed on the resource pack management page is a free STANDARD storage pack).
2. A previously purchased resource pack whose price has changed (for example, price reduction) can no longer be renewed or upgraded, so you need to purchase a new one.
3. Storage packs can be upgraded, while traffic packs and request packs cannot. To upgrade a traffic pack or request pack, you need to purchase a new one at [Pricing | Cloud Object Storage](#). Multiple traffic packs or request packs can be used together.

### Note

For renewal and upgrade guidance, see [Resource Pack Renewal](#) and [Resource Pack Upgrade](#) documentation.

## How can I view the usage of my storage packs?

Users can go to **COS Console** > [Resource Pack Management – Self-purchased Resource Packs](#) to view the effective time, expiration time, and usage of purchased resource packs.

## Can I renew or upgrade my COS storage pack?

Yes. For detailed directions, see [Renewing a Resource Pack](#) and [Upgrading a Resource Pack](#).

## What is the difference between renewing and upgrading a COS resource pack?

**Renewing a resource pack** means extending the validity period of a resource pack.

- You can renew a resource pack if it will expire soon and you need to extend its availability.
- For example, if you purchased a public network downstream traffic pack of 50 GB with a validity period of three months and manually renewed it for three months, then its validity period would be extended by three months, during which you would get monthly traffic of 50 GB.

**Upgrading a resource pack** means increasing the specification of a resource pack.

- You can upgrade a resource pack if it no longer meets your actual business needs and you need a resource pack of a higher specification.
- For example, if you purchased a public network downstream traffic pack of 50 GB with a validity period of three months and upgraded it to 100 GB on the upgrade page, then it can be applied to deduction of 100 GB public network downstream traffic every month, with its validity period being unchanged.

## Can I return a COS resource pack?

Yes. A self-service refund is available for resource packs that are eligible for a refund. For more information, see [Self-Service Refund](#).

## Will my data be lost after the COS resource pack expires? Do I need to migrate the data?

No. A resource pack is only used for deduction of your usage and not for storage of data. A resource pack will be **automatically switched to the pay-as-you-go billing mode** after it is used up or expires, that is, fees will be deducted from your account balance. Therefore, your data won't be lost, and **you don't need to migrate your data**. Your data will be destroyed only if your payment is overdue for 120 days. For more information, see [Payment Overdue](#).

## What is the relationship between a COS resource pack and a bucket?

A COS bucket is the space used to store data, while a resource pack is a prepaid mode used for deduction based on billable items and the region. There is no mapping between a resource pack and a bucket. For more information, see [Resource Pack \(Prepaid\)](#).

For example, if there is a STANDARD storage pack of 50 GB for regions in the Chinese mainland with a validity period of three months under your account, it can be applied to deduction of the STANDARD storage usage generated by all buckets in regions in the Chinese mainland under your account.

## What resource pack should I purchase for deduction of fees incurred by enabling global acceleration for COS?

Traffic fees incurred by using the global acceleration feature can be deducted from a **global acceleration traffic pack**. For more information on global acceleration and its billing details, see [Overview](#).

## Will COS services be suspended after the purchased resource pack expires?

Upon expiration of the resource pack, you will be billed using the **pay-as-you-go** method. If your account has overdue payments, COS will suspend the service after 24 hours. Your data

can be retained for 120 days. If you do not top up your account to a positive balance during this period, your data will be destroyed. For more information, see the [Overdue Payment](#) documentation.

## Can I migrate a COS resource pack to another Tencent Cloud account?

No. A COS resource pack cannot be migrated to another account and can only be used under the account under which it was purchased.

## Does a COS resource pack cover request fees?

Different resource pack types are available for different billable items of COS. You need to purchase a separate request pack for deduction of requests. Currently, **STANDARD request packs** and **STANDARD\_IA request packs** are available and can be purchased at [Pricing | Cloud Object Storage](#).

## Do I need to purchase a COS traffic pack?

You can purchase a traffic pack suitable for your actual use case. COS offers multiple billable items, and the free tier can only be applied to deduction of STANDARD storage usage. As traffic fees and request fees may also be incurred, we recommend that you purchase a **public network downstream traffic pack** and a **request pack** in advance at [Pricing | Cloud Object Storage](#).

## Can a COS resource pack be applied to overdue payment?

If you configure a resource pack to **take effect immediately** when purchasing it, your usage on the day of purchase can be deducted from the resource pack, and your earlier usage will not be deducted. Therefore, a resource pack cannot be applied to overdue payment.

## How are COS resource packs applied to deduction?

When bills are settled within the validity period of the COS resource package, the following rules apply:

- **Resource package type:** Free tier resource packages are used for deduction before the purchased resource packages. If the total usage exceeds the specifications of both free tier and purchased resource packages, the excess part is billed in pay-as-you-go mode.
- **Expiration time of resource package:** Resource packages that expire first will be used first. **Note: The expiration time here refers to the time specified in the validity period of the resource package instead of that of the current cycle.**
- **Resource package usage:** Resource packages with more remaining quotas will be used first.

- Purchase time of resource package: Resource packages that are purchased first will be used first.

For further description of the rules, see the [Types and Rules](#) section in Resource Package Overview.

## What are the unit conversion rules of COS resource packages?

COS provides storage capacity packages, traffic packages, and request packages.

1. The billing unit of the storage capacity billing item and storage capacity packages is GB, and the capacity unit conversion ratio is 1:1,024. For example, 1 TB of standard storage capacity equals 1,024 GB. A standard storage capacity package of 1 TB can deduct fees of 1,024 GB of standard storage capacity.
2. The billing unit of the traffic billing item and traffic packages is GB, and the traffic unit conversion ratio is 1:1,024. For example, 1 TB of public network downstream traffic equals 1,024 GB. A public network downstream traffic package of 1 TB can deduct fees of 1,024 GB of public network downstream traffic. This conversion rule will take effect from April 1, 2025.
3. The billing unit of the request billing item and request packages is 10,000 requests. For example, a standard storage request package with a quota of 100,000 requests can deduct fees of 100,000 standard storage requests.

## What is the expiration, isolation, and termination of a COS resource pack?

### 1. Scope

The expiration, isolation, and deletion policies for COS resource packs apply only to purchased resource packs (i.e., [self-purchased resource packs](#)) and not to gifted resource packs (i.e., [free quota resource packs](#)). You can view and confirm the classification of your current resource packs in the COS Console under [Resource Pack Management](#).

### 2. Definitions

**Expiration:** Your resource pack has expired.

- In the COS Console, go to [Resource Pack Management](#) to view the validity period of resource packs. The effective date refers to the start time of the resource pack, and the

expiration date refers to the end time of the resource pack.

**资源包管理**

- 自购资源包
- 免费额度资源包

**自购资源包**

对象存储 COS 数据处理资源包组合购特惠来袭! [立即体验>>](#)

使用须知: 资源包规格可叠加 资源包可自动退订 新购资源包不可抵扣已出账用量 资源包到期/用尽后, 自动按量计费 资源包未用完额度不累计

1、资源包是 COS 针对不同计费项推出的优惠套餐, 与您存储的文件无关, 仅用于抵扣您在使用过程中产生的用量费用, 退款、过期、用尽资源包均不会影响您存储的文件。若已购买资源包后仍然产生扣费, 请了解更多。  
2、COS调整了资源包的有效时长、重置日及续费策略。在2021.12.1之前新购以及续费的资源包, 有效期一个月按30天计算。在此之后新购、续费的资源包, 有效期按照实际几号购买几号到期计算。为保证您能享受到最优惠的策略, 历史周期为30天的资源包支持续费, 且续费时长按照新有效期策略计算。详情请查看文档

资源包名称/ID	生效地域	计费项	来源	规格	用量说明	有效期	续费类型	操作
外网下行流量包 idc_traffic-	中国大陆通用	流量	购买	10.00GB	2023-02-07 24点已重置用量 本周期截止昨日已用: 100.00% (10.00GB)	生效: 2022-03-07 00:00:00 到期: 2023-03-07 23:59:59	自动续费	<a href="#">查看明细</a> <a href="#">新购</a> <a href="#">续费</a>
标准存储容量包 std_storage-	中国大陆通用	存储容量	购买	500.00GB	每日统计昨日用量 昨日抵扣量: 100.00% (500.00GB)	生效: 2022-02-24 00:00:00 到期: 2023-03-24 23:59:59	手动续费	<a href="#">查看明细</a> <a href="#">升级</a> <a href="#">续费</a>
标准存储容量包 std_storage-	中国大陆通用	存储容量	购买	10.00GB	每日统计昨日用量 昨日抵扣量: 100.00% (10.00GB)	生效: 2022-02-22 00:00:00 到期: 2023-02-22 23:59:59	自动续费	<a href="#">查看明细</a> <a href="#">升级</a> <a href="#">续费</a>

- In the Billing Center – [Renewal Management](#) page: You can view the expiration time of resource packs.

**续费管理**

1、资源/服务到期前我们会检验帐户余额是否充足, 如若不足我们会提前提醒您及时对账户充值。已设置自动续费的资源, 将在资源/服务期限届满当天按续费周期自动续费, 系统自动从您的账号中扣取下一个续费周期的费用。若您的账号内可用余额不足、账号被限制新购服务、账号实名处于异常状态等情形均无法完成自动续费。  
2、资源设置自动续费后, 除非另有明确约定, 自动续费的价格为系统执行扣费当时的资源/服务价格。如有可用的代金券/现金券, 系统将自动使用代金券/现金券续费。  
3、产品/服务价格变动时, 腾讯云会通过站内信、短信、邮件或网站公告等方式通知您。  
4、已续费资源可在 [发票与合同](#) 中申请发票与合同, 已续费未生效的订单可在以下操作-更多中进行退订。您可能想了解: [如何设置统一到期日](#) [续费常见问题](#) [退订续费订单说明](#)

时间范围: [全部 \(336\)](#) [7天内到期 \(23\)](#) [15天内到期 \(216\)](#) [30天内到期 \(311\)](#) [2个月内到期 \(324\)](#) [3个月内到期 \(331\)](#) [已到期 \(15\)](#)

产品类别: [云硬盘CBS \(139\)](#) [云数据库MySQL \(6\)](#) [云服务器CVM \(64\)](#) [域名注册 \(4\)](#) [智能媒资托管 \(19\)](#) [弹性MapReduce \(39\)](#) [云联网CCN \(2\)](#) [消息服务CKafka \(5\)](#) [DNS 解析 \(2\)](#)  
[Elasticsearch Service \(1\)](#) [云数据库TencentDB for MongoDB \(4\)](#) [云数据库Redis \(1\)](#) [T-Sec-DDoS防护\(Anti-DDoS\) \(5\)](#) [云监控 \(2\)](#) [COS 对象存储 \(40\)](#) [存储网关CSG \(2\)](#)  
[腾讯云数据可视化 \(1\)](#)

地域: [其他 \(38\)](#) [上海 \(2\)](#)

**手动续费项 (1)**    **自动续费项 (37)**    **到期不续费 (0)**

输入实例ID/实例名称搜索

资源ID/资源名	产品描述	地域/可用区	所属项目	到期时间	资源状态	最小续费周期	单价	操作
std_storage-20220...	类型: 标准存储容量, ... 规格: 500 GB	其他地区 (其他) 中国大陆通用	默认项目	2023-03-24	运行中	1个月	59.00元/月	<a href="#">续费</a> <a href="#">设为自动续费</a> <a href="#">更多</a>

**Isolation:** Your resource pack will be isolated one day after expiration.

- In the COS Console – [Resource Pack Management](#) page: Isolated resource packs can be viewed in the expired resource pack list.

The screenshot shows the Tencent Cloud COS console interface. In the left sidebar, the 'Resource Pack Management' menu is highlighted. The main content area displays a table of resource packs. The table has columns for 'Resource Pack Name/ID', 'Valid Region', 'Billing Category', 'Source', 'Specification', 'Usage', 'Validity', and 'Billing Type'. Two resource packs are listed, both with 100% usage and expiration dates in 2022. The 'Expired Resource Pack' filter is highlighted in the top right.

Resource Pack Name/ID	Valid Region	Billing Category	Source	Specification	Usage	Validity	Billing Type
标准存储容量包 std_storage	中国大陆通用	存储容量	购买	10.00GB	已使用: 100.00% (10.00GB)	生效: 2022-03-16 00:00:00 到期: 2022-07-16 23:59:59	到期不续
标准存储容量包 std_storage	中国香港和海外通用	存储容量	购买	10.00GB	已使用: 100.00% (10.00GB)	生效: 2022-03-07 00:00:00 到期: 2022-07-07 23:59:59	到期不续

- On the [Renewal Management](#) page in the Billing Center, isolated resource packs are not displayed and cannot be renewed. To use a resource pack of the same configuration, purchase a new one at [Pricing | Cloud Object Storage](#).

**Termination:** Your resource pack will be isolated one day after expiration and will be terminated after 365 days of isolation.

- On the [Resource Packs](#) page in the COS console, terminated resource packs are not displayed.
- On the [Renewal Management](#) page in the Billing Center, terminated resource packs are not displayed.

## Notification of change of a COS resource pack expiration/isolation/termination policy

Details are as follows:

### 1. Scope

This isolation and deletion policy change applies only to purchased resource packs (i.e., [self-purchased resource packs](#) in the list) and does not affect gifted resource packs (i.e., [free quota resource packs](#) in the list). You can view and confirm the classification of your current resource packs in the COS Console under [Resource Pack Management](#).

### 2. Policy description

Rule	Before Change	After Change
------	---------------	--------------

Expiration of a COS resource pack	An expiration reminder is sent before the expiration of the resource pack, and an expiration notification is sent after the expiration of the resource pack.	Both the policies for sending the expiration reminder and the expiration notification remain unchanged, and the notification text is updated.
Isolation of a COS resource pack	No isolation policy	A resource pack will be isolated one day after expiration. Isolated resource packs are displayed on the <a href="#">Resource Packs</a> page in the COS console and not displayed on the <a href="#">Renewal Management</a> page in the Billing Center.
Termination of a COS resource pack	No termination policy	A resource pack will be isolated one day after expiration and will be terminated after 365 days of isolation. Terminated resource packs are not displayed on both the <a href="#">Resource Packs</a> page in the COS console and the <a href="#">Renewal Management</a> page in the Billing Center.

### 3. Use cases

If you purchased a STANDARD storage pack of 10 GB with a validity period of one month on January 1, 2023, the resource pack would expire on January 31, 2023. You would receive an expiration reminder before the expiration of the resource pack and receive an expiration notification after the expiration of the resource pack.

- Before change: The resource pack will be displayed on the **Resource Packs** page in the COS console and on the **Renewal Management** page in the Billing Center after expiration, and will exist permanently.
- After change: One day after expiration, the resource pack will be isolated and will be displayed on the **Resource Packs** page in the COS console and not be displayed on the **Renewal Management** page in the Billing Center. After 365 days of isolation, the resource pack will be terminated and will not be displayed on both the **Resource Packs** page in the COS console and the **Renewal Management** page in the Billing Center.

## Notification

### What types of notifications does COS send?

COS sends notifications for new feature launch, product change, expiration, repossession, and alarms.

## What are subscribed and non-subscribed messages?

- Subscribed messages: You can customize their recipients and notification methods in Message Center. They are used in default scenarios.
- Non-subscribed messages: You cannot modify their recipients and notification methods but can only receive them passively. They are used in special scenarios.

## How do I configure the root account and sub-accounts to receive COS notifications?

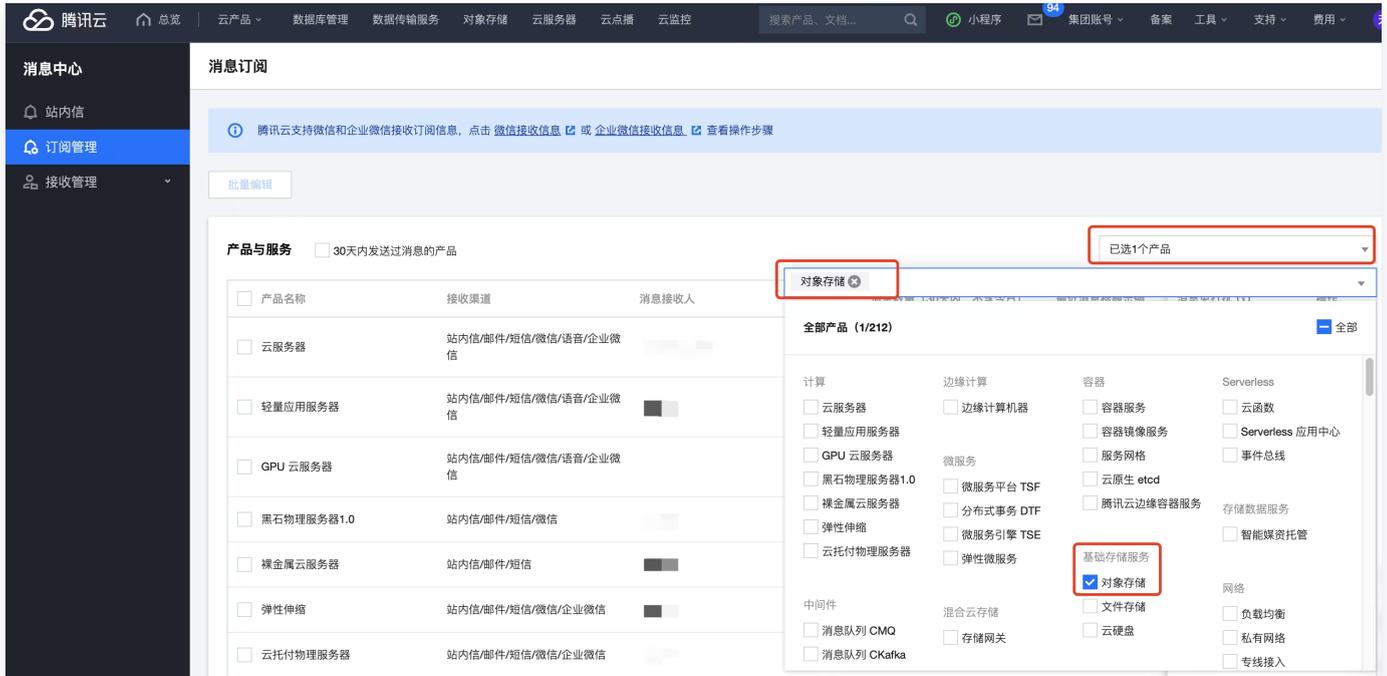
COS notifications support custom recipients. You can set **message recipients** in the [Subscription Management](#) section of the Message Center.

Details are as follows:

1. Log in to the Tencent Cloud console and go to the [Subscription Management](#) page in the Message Center.



## 2. In the product and service list filter, select Cloud Object Storage.



## 3. In the row of the object storage, click **Edit** to set the recipient.



## 4. In the basic subscription editing mode, you can configure whether to receive messages for the **Cloud Object Storage** product, the receiving channel, and recipients. If you need to set more granular message notifications, click on the bottom right corner to enter **Advanced**

## Editing Mode.



5. In Advanced Editing mode, you can configure whether to receive more specific message types. For example, if you want a specific sub-account to receive **Product Expiration and Recycling Notifications**, simply modify the recipients.



## What are the resource packs and billing notifications for COS?

Notification sources can be categorized as follows:

- COS notifications include resource pack purchase success, resource pack overage reminders, and free quota expiration reminders.
- Billing Center: Notifications include resource expiration alerts, resource expiration reminders, resource release warnings, and resource release notifications.

Therefore, if you need to set up sub-accounts to receive notifications, you must select the corresponding product to which the notification belongs.

Example:

- To set up a sub-account to receive resource pack overage alerts, go to the subscription management in the Message Center and select the product **Cloud Object Storage** for configuration.



- To set up a sub-account to receive resource expiration alerts, go to the Subscription Management in the Message Center and select the product **Billing Center** for configuration.



## What is the policy for sending reminders of exceeding COS resource packs?

Reminders are sent of exceeding all COS resource packs of the same type. Up to four reminders are triggered every month for all resource packs of the same type, regardless of their number.

Note: For example, if there are two STANDARD storage packs, one STANDARD request pack, and three public network downstream traffic packs under your account, then you have three types of resource packs; therefore, you will receive up to four reminders for each type of resource pack in a month.

For example, the system will send reminders when the usage of the three public network downstream traffic packs reaches 90% and 100%.

## Traffic

### What are the differences among COS public network downstream traffic, CDN origin-pull traffic, and global acceleration traffic?

- **Public network downstream traffic:** The traffic generated by data transfer from COS to the client over the internet, such as the traffic generated when you directly access a resource at a COS domain name in a browser, which can be deducted from a **public network downstream traffic pack**.
- **CDN origin-pull traffic:** When CDN acceleration is enabled and accessed using a CDN domain, the traffic generated from transferring data from COS to Tencent Cloud CDN/EdgeOne edge nodes. This can be offset using **CDN origin-pull traffic packs**.
- **Global Acceleration Traffic:** Traffic generated by data transfer using global acceleration domain names after enabling the global acceleration feature can be deducted through **Global Acceleration Traffic Packages**.

### How is the public network downstream traffic in COS generated and billed?

Public network downstream traffic refers to the data transmitted from COS to the client through the internet. Traffic generated by users directly downloading objects via **object links** or browsing objects through **static website origin** is considered public network downstream traffic, with corresponding fees as public network downstream traffic charges. For detailed information on public network downstream traffic billing, please refer to [Billing Items](#) and [Product Pricing](#).

### Will I be charged for public network downstream traffic generated by downloading files through the COS console, tools, API, or SDK?

The traffic (private or public network traffic) generated by accessing COS is subject to the use case, and only access to COS from a Tencent Cloud product in the same region will be over the private network by default, with no public network downstream traffic fees incurred. For more information on how to identify private network access, see [Overview > Private Network Access](#).

## What is public network traffic in COS?

Public network downstream traffic is the traffic generated by data transfer from COS to the client over the internet. Downloading a file stored in COS in the COS console, accessing or downloading an object through a tool, object address, or custom domain name, and previewing an object in a browser will generate public network downstream traffic. For more information, see [Overview](#).

## Will accessing COS over the private network incur fees?

When accessing Object Storage via the private network, **traffic fees are waived**, but **storage capacity** and **request count** will still incur related costs. For more information, see [Billing Items](#).

## Does COS offer traffic packs?

COS offers three types of traffic packs: **public network downstream traffic pack**, **CDN origin-pull traffic pack**, and **global acceleration traffic pack**. **Public network downstream traffic packs** are most used, and traffic fees will be incurred only after the corresponding feature is enabled for the latter two. You can purchase traffic packs at [Pricing | Cloud Object Storage](#). For more information on traffic fees, see [Traffic Fees](#).

## How will COS be billed after it is connected to CDN?

After COS is connected to CDN, the fees incurred by COS and CDN will be billed separately.

- COS fees include storage usage fees, request fees, and CDN origin-pull traffic fees. You can purchase COS resource packs at [Pricing | Cloud Object Storage](#).
- CDN fees include CDN traffic fees. You can purchase CDN resource packs on the [purchase page](#).

## Do I only need to purchase a CDN traffic package when using COS with CDN?

When CDN acceleration is enabled and accessed via the CDN acceleration domain, CDN traffic fees and CDN origin-pull traffic fees will be incurred, while public network outbound traffic fees will not be charged. In this case, you only need to purchase CDN origin-pull traffic packages and CDN traffic packages.

- [Go to purchase CDN origin-pull traffic package](#)
- [Go to purchase CDN Traffic Package](#)

## Why is there public network downstream traffic after I enabled CDN acceleration?

After enabling CDN acceleration, if you still access files on COS using the source domain name (in the format `<BucketName-APPID>.cos.<region>.myqcloud.com`), public network downstream traffic fees will still be incurred. COS recommends using the CDN acceleration domain name to access files, which will only generate back-to-origin traffic for CDN/EdgeOne.

## What is COS's CDN/EdgeOne origin-pull traffic, and how is it generated?

When accessing a file through a CDN/EdgeOne domain name, if the file is not cached on the CDN/EdgeOne edge node, CDN/EdgeOne will fetch the data from COS to the cache node. This action is referred to as CDN/EdgeOne origin-pull.

### Note

CDN/EdgeOne origin-pull traffic incurs fees. For specific rates, please refer to the [Traffic Fees](#) documentation.

## How is the CDN/EdgeOne origin-pull traffic billed for COS?

CDN/EdgeOne origin-pull traffic is the data transferred from COS to Tencent Cloud CDN/EdgeOne edge nodes. When users enable CDN acceleration, the traffic generated by browsing or downloading COS data through the **Tencent Cloud CDN accelerated domain** is considered CDN/EdgeOne origin-pull traffic, and the corresponding fee is the CDN origin-pull traffic fee. For detailed information on COS CDN origin-pull traffic billing, please refer to [Billing Overview](#) and [Pricing | Cloud Object Storage](#).

## What are the differences between CDN/EdgeOne origin-pull traffic and CDN traffic?

CDN/EdgeOne origin-pull traffic is a billable item for COS. When users use COS as the origin for CDN/EdgeOne, the traffic generated from transferring data from COS to Tencent Cloud CDN/EdgeOne edge nodes is considered origin-pull traffic.

CDN traffic is a billing item for Tencent Cloud Content Delivery Network (CDN). It refers to the data transferred from Tencent Cloud CDN/EdgeOne edge nodes to the user end.

## Will fees be charged for traffic and requests generated by data transfer between COS and CVM?

When data transfer happens between COS and CVM from different regions, there are charges for both traffic and requests. When data is transferred in the same region, there are charges for requests, but not for traffic (free for data transfer over private network). For more information, see [How to determine access over private network](#).

## Will there be traffic fees when I upload a file to a COS bucket?

No. The upstream traffic generated by file uploads is free of charge.

## Will there be traffic fees when I access Tencent Cloud products in the same region?

Tencent Cloud products within the same region access each other over the private network by default, with no traffic fees incurred. For more information, see [How to determine an access over private network](#).

## Bill

### How do I view my bill?

You can view the cost information generated by using the COS service in the Billing Center of the console. For detailed query methods, please refer to [View and Download Bills](#). Bucket-level billing details can be viewed by downloading the usage details in the [Billing Center](#) of the console.

### How do I download a bill?

You can log in to the Tencent Cloud console and download the required bill packages, L0–PDF bills, L1–multidimensional summary bills, L2–resource bills, and L3–detailed bills through the [Bill Download Center](#) in the Billing Center. For more information, see [Bill Download Center](#).



## What are billing by bucket and cost allocation by tag?

- **Billing by bucket:** It refers to using the bucket name and `APPID` together as the **resource ID** and using the bucket name as the **instance name**, i.e., generating bills by bucket. You

can view the fees and usage of billable items by bucket.

- **Cost allocation by tag:** Refers to differentiating resource ownership using **cost allocation tags**. For more information on setting up cost allocation tags, see [Cost Allocation Tags](#).

## How do I set billing by bucket and cost allocation by tag?

- **Bucket-based billing:** COS has fully implemented bucket-based billing, and subsequent bills will be generated per bucket. You no longer need to apply for a whitelist. For more information on bucket-based billing, see [What is the release plan for COS bucket-based billing](#). Historical bills before the full implementation remain unchanged, meaning bills generated before the bucket-based billing feature was introduced are still **Resource ID bills**.
- To allocate costs by tag, you need to add tags to the bucket and then set cost allocation tags. For more information, see [Setting Bucket Tags](#) and [Cost Allocation Tags](#).

## How do I determine whether bills are generated by bucket?

You can determine this in two ways:

- **Method 1:** You can view the billing details in the [Bill Details](#) section of the Expense Center, under **Resource ID Bills** and **Detailed Bills**. If the **Resource Alias/ID** column shows the bucket name + APPID, the billing is done by the bucket.
- **Method 2:** You can download the L3: Bill Details in the [Billing Download Center](#). If the **Resource ID** column is the bucket name + APPID, and the **Instance Name** is the bucket name, then the bill is generated by the bucket.

Below are the effects after billing by bucket is enabled:

### (1) Bill by Instance

**账单详情** 2022-10 按扣费周期 (按扣费时间统计生成月度账单) ⓘ

**资源ID账单** 明细账单

次月1号出账, 当前展示的是截至2022年10月21日扣费的资源费用, 部分按量付费资源还未结算, 查询结果仅供参考; 实时扣费数据请您查看明细账单。  
 明细账单费用最多支持8位小数, 资源ID账单展示的费用为四舍五入后保留2位小数的费用, 实际从账户扣费时按2位小数进行扣费 (即扣到分)。如需帮助, 可查看 [新版账单使用指南](#)。

COS 对象存储 全部子产品 全部项目 全部地域 全部可用区 全部计费模式

全部交易类型 全部标签  不显示0元费用

总费用: 元 = 现金支付 元 + 分成金支付 0.00 元 + 赠送金支付 0.00 元 + 优惠券支付 0.00 元

资源别名/ID	产品名称	地域	可用区	原价	折扣率	总费用	操作
cgilogcq-gzip cgilogcq-gzip-	COS 对象存储	西南地区 (重庆)	重庆一区		0.65		<a href="#">账单详情</a>
cgilogcq-parquet cgilogcq-parquet-	COS 对象存储	西南地区 (重庆)	重庆一区		0.65		<a href="#">账单详情</a>
cilogcq cilogcq-..	COS 对象存储	西南地区 (重庆)	重庆一区		0.65		<a href="#">账单详情</a>

## (2) Detailed Bills

账单详情 2022-10 按扣费周期 (按扣费时间统计生成月度账单) ①

资源ID账单 **明细账单**

支持页面在线查询近18个月账单数据, 超过18个月的历史账单及数据量过大的月份账单可下载文件至本地查看。  
 资源ID账单数据可能有延迟, 实时数据请您查看明细账单。次月1号出账, 当前月份账单出账未完成, 以下费用不是最终的本月账单费用, 仅供参考。  
 明细账单费用最多支持8位小数, 资源ID账单展示的费用为四舍五入后保留2位小数的费用, 实际从账户扣费时按2位小数进行扣费 (即扣到分)。如需帮助, 可查看 [新版账单使用指南](#)。

COS 对象存储 全部子产品 请先选择子产品 全部项目 全部地域 全部可用区

全部计费模式 全部交易类型 不显示0元费用

总费用: 元 = 现金支付 元 + 分成金支付 0.00000000 元 + 赠送金支付 0.00000000 元 + 优惠券支付 0.00000000 元

资源别名/ID	产品名称	计费模式	项目	子产品名称	组件类型	组件名称	地域
testshhadoop testshhadoop-	COS 对象存储	按量计费	默认项目	COS 归档存储	归档存储存储容量	COS 归档存储存储容量	华东地区 (上海)
hui-pub hui-pub-	COS 对象存储	按量计费	默认项目	COS 归档存储	归档存储存储容量	COS 归档存储存储容量	华东地区 (上海)
edmund-test-0228 edmund-test-0228-	COS 对象存储	按量计费	默认项目	COS 归档存储	归档存储存储容量	COS 归档存储存储容量	华东地区 (上海)

## (3) L3: Bill Details

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
产品名称	计费项	项目	地域	可用区	国内/国际	资源ID	实际名称	子产品名称	交易类型	订单号	交易ID	扣费时间	开始使用时间	结束使用时间	组件名称	组件名称	组件单位	组件单价	组件使用量	组件使用量	使用时长	时长	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 标准存储	按量计费		02206259	2022-06-25 08:11:45	2022-06-24 00:00:00	2022-06-24 23:59:59	COS 标准存储读请求	COS 标准存储读请求	0.01	0.01	元/万次请求	0.0104	万次请求	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 智能分层存储	按量计费		02206259	2022-06-25 08:11:42	2022-06-24 00:00:00	2022-06-24 23:59:59	COS 智能分层存储读请求	COS 智能分层存储读请求	0.0058333	0.0037917	元/万个对象/天	0.0001	万个对象	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 智能分层存储	按量计费		02206019	2022-06-01 08:18:37	2022-05-01 00:00:00	2022-05-31 23:59:59	COS 智能分层存储读请求	COS 智能分层存储读请求	0.01	0.0065	元/万次请求/天	0.0001	万次请求	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 智能分层存储	按量计费		02206019	2022-06-01 08:18:37	2022-05-01 00:00:00	2022-05-31 23:59:59	COS 智能分层存储读请求	COS 智能分层存储读请求	0.175	0.11375	元/万个对象/天	4.51665	万个对象	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 智能分层存储	按量计费		02206019	2022-06-01 08:18:37	2022-05-01 00:00:00	2022-05-31 23:59:59	COS 智能分层存储读请求	COS 智能分层存储读请求	0.01	0.0065	元/万次请求/天	0.0002	万次请求	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 标准存储	按量计费		02206239	2022-06-23 08:09:21	2022-06-22 00:00:00	2022-06-22 23:59:59	COS 标准存储读请求	COS 标准存储读请求	0.01	0.01	元/万次请求/天	0.0077	万次请求	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 智能分层存储	按量计费		02206239	2022-06-23 08:11:11	2022-06-22 00:00:00	2022-06-22 23:59:59	COS 智能分层存储读请求	COS 智能分层存储读请求	0.0058333	0.0037917	元/万个对象/天	0.0001	万个对象	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 标准存储	按量计费		02206019	2022-06-01 08:04:12	2022-05-01 00:00:00	2022-05-31 23:59:59	COS 标准存储存储容量	COS 标准存储存储容量	0.099	0.0099	元/GB/天	1.202145	GB	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 智能分层存储	按量计费		02206239	2022-06-23 08:11:36	2022-06-22 00:00:00	2022-06-22 23:59:59	COS 智能分层存储读请求	COS 智能分层存储读请求	0.0033	0.0033	元/GB/天	1.4231012	GB	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 智能分层存储	按量计费		02206239	2022-06-26 08:11:36	2022-06-25 00:00:00	2022-06-25 23:59:59	COS 智能分层存储读请求	COS 智能分层存储读请求	0.0058333	0.0037917	元/万个对象/天	0.0001	万个对象	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 标准存储	按量计费		02206269	2022-06-26 08:11:34	2022-06-25 00:00:00	2022-06-25 23:59:59	COS 标准存储存储容量	COS 标准存储存储容量	0.0033	0.0033	元/GB/天	1.4432034	GB	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 标准存储	按量计费		02206279	2022-06-27 08:11:38	2022-06-26 00:00:00	2022-06-26 23:59:59	COS 标准存储存储容量	COS 标准存储存储容量	0.0033	0.0033	元/GB/天	1.4510678	GB	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 智能分层存储	按量计费		02206279	2022-06-27 08:11:23	2022-06-26 00:00:00	2022-06-26 23:59:59	COS 智能分层存储读请求	COS 智能分层存储读请求	0.0058333	0.0037917	元/万个对象/天	0.0001	万个对象	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 标准存储	按量计费		02206249	2022-06-24 08:12:21	2022-06-23 00:00:00	2022-06-23 23:59:59	COS 标准存储读请求	COS 标准存储读请求	0.01	0.01	元/万次请求/天	0.0157	万次请求	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 标准存储	按量计费		02206249	2022-06-24 08:12:31	2022-06-23 00:00:00	2022-06-23 23:59:59	COS 标准存储存储容量	COS 标准存储存储容量	0.0033	0.0033	元/GB/天	1.4309722	GB	1天	
COS 对象存储	按量计费	默认项目	西南地区 (重庆)	重庆一区	国内	000001-		1 COS 标准存储	按量计费		02206254	2022-06-25 08:11:47	2022-06-24 00:00:00	2022-06-24 23:59:59	COS 标准存储存储容量	COS 标准存储存储容量	0.0033	0.0033	元/GB/天	1.435295	GB	1天	
COS 对象存储	按量计费	默认项目	华东地区 (广州)	广州三区	国内	000009ak-	000009ak-	1 COS 标准存储	按量计费		02206249	2022-06-24 08:11:27	2022-06-23 00:00:00	2022-06-23 23:59:59	COS 标准存储读请求	COS 标准存储读请求	0.01	0.01	元/万次请求/天	0.0083507	万次请求	1天	
COS 对象存储	按量计费	默认项目	华东地区 (广州)	广州三区	国内	000009ak-	000009ak-	1 COS 标准存储	按量计费		02206239	2022-06-23 08:09:21	2022-06-22 00:00:00	2022-06-22 23:59:59	COS 标准存储读请求	COS 标准存储读请求	0.01	0.01	元/万次请求/天	0.0077065	万次请求	1天	

### Note

After the full release of COS bucket-based billing, the **Cost Allocation – Monthly** sheet in the usage detail bill will no longer display the cost allocation for storage buckets, while other information remains unchanged. For specific costs related to storage buckets, please download the L2 or L3 bills for review.

## How is the billing by bucket feature of COS launched?

COS bucket-based billing rollout plan consists of two phases:

### Phase 1:

Before February 6, 2023, users can apply for **bucket-based billing whitelist on-demand**. By joining the **whitelist**, billing will be based on storage buckets. This is manifested as:

- If you have applied for the bucket-based billing whitelist: The Resource ID and Instance Name columns in the bill will change. The Resource ID column will display the bucket name

+ APPID, and the Instance Name column will display the bucket name.

- If you have not applied for the allowlist for billing by bucket: the bill remains unchanged.

#### Phase 2:

Starting from February 6, 2023, COS will gradually roll out billing by bucket for users not added to the **Bucket Billing Whitelist**. By April 25, 2023, COS bucket billing will be available to all users with any UIN suffix. The feature has been fully released, and subsequent bills will be directly billed by the bucket.

The canary release strategy is **based on the last digit of the UIN**, as detailed below:

#### Note

Users who have not previously applied for the **bucket-based billing allowlist** will be able to use the bucket-based billing feature through this phased rollout plan.

Release Date	Release Note	Bill Description
February 1, 2023	Before full launch – allowed account verification.	(1) For users who have not applied for the allowlist, the billing remains unchanged. (2) For users who have applied for the whitelist, the bill will change and be charged per bucket.
February 6, 2023	Batch 1 launch – for UINs ending in 9	(1) For users who have applied for the whitelist and users with a UIN ending in 9, the bill will change and be charged per bucket. (2) For other users, the bill remains unchanged.
February 20, 2023	Batch 2 launch – for UINs ending in 2	(1) For users who have applied for the whitelist and users with UIN ending in 9 or 2, the bill will be updated and charged per bucket. (2) For other users, the bill remains unchanged.
March 7, 2023	Batch 3 launch – for UINs ending in 3	(1) For users who have applied for the whitelist and those with UIN ending in 9, 2, or 3, the billing will be adjusted and charged per bucket. (2) For other users, the bill remains unchanged.
March 14, 2023	Batch 4 launch – for UINs ending in 4	(1) For users who have applied for the whitelist and users with UIN ending in 9, 2, 3, or 4, the bill will be generated based on the bucket usage. (2) For other users, the bill remains unchanged.

March 21, 2023	Batch 5 launch – for UINs ending in 5	(1) For users who have applied for the whitelist and those with UIN ending in 9, 2, 3, 4, or 5, the billing will be adjusted and charged per bucket. (2) For other users, the bill remains unchanged.
March 27, 2023	Batch 6 launch – for UINs ending in 6	(1) For users who have applied for the whitelist and those with UIN ending in 9, 2, 3, 4, 5, or 6, the bill will be generated based on the bucket usage. (2) For other users, the bill remains unchanged.
April 3, 2023	Batch 7 launch – for UINs ending in 7	(1) Billing by bucket will be enabled for users in the allowlist and with UINs ending in 9, 2, 3, 4, 5, 6, or 7. (2) Billing will stay unchanged for other users.
April 25, 2023	Batch 8 Release – UINs ending in 8, 1, 0	Billing for all users (including those on the whitelist and users with UIN ending in 9, 2, 3, 4, 5, 6, 7, 8, 1, 0) is based on the bucket.

## How do I view the billing statistical period?

You can log in to the Tencent Cloud console and view your account's billing cycle through the [Bill Overview](#) in the Billing Center. The billing cycle, whether it's a charging cycle or a deduction cycle, is displayed in the red box as shown in the image below.



## What are billing by deduction cycle and billing by billing cycle?

- Billing by deduction cycle: The system generates a bill per calendar month based on the **resource fees deduction time**.
- Billing by billing cycle: The system generates a bill per calendar month based on the **actual resource usage time**.

## What is the relationship between the billing mode and billing statistical period?

COS supports two billing modes: pay-as-you-go (postpaid) and resource pack (prepaid).

- Pay-as-you-go (postpaid) resources
  - Daily settled resources: Fees incurred from 00:00 to 23:59 on January 31 will be deducted on February 1. The record will be posted to the bill for February by deduction cycle and to the bill for January by billing cycle.
  - Monthly settled resources: Fees incurred from 00:00 on January 1 to 23:59 on January 31 will be deducted on February 1. The record will be posted to the bill for February by deduction cycle and to the bill for January by billing cycle.
- Prepaid Resource Packs
 

Resource packs (new purchase, renewal, upgrade/downgrade, and refund upon termination) are billed or refunded based on the time of the transaction. Regardless of the billing cycle, the records are included in the invoice for the natural month in which the fees occurred.

For more information on billing cycles, see [Bill Management](#).

## Why did the amount of the bill (by deduction cycle) of the first month “increase” after the upgrade from monthly to daily settlement?

Starting from July 1, 2022, the settlement cycle of COS storage usage, request, and data retrieval fees was upgraded from monthly to daily to help you manage fees in a more refined manner. The upgrade was implemented on user accounts in batches and went through a two-month beta test. The release dates of different bill statistical periods are as listed below. For more information, see [Daily Billing for COS Storage Usage, Request, and Data Retrieval](#) and [Bill Management](#).

Release Date	Release Note	Bill Description
July 1, 2022	The first release for the first batch of accounts in beta test	<p>(1) Before July 1, 2022, billing is done monthly. Consumption from June 1, 00:00 to June 30, 23:59 will be charged on July 1. If categorized by deduction period, this record belongs to July's bill; if categorized by billing period, this record belongs to June's bill.</p> <p>(2) After July 1, 2022, billing will be settled daily. For usage incurred between 00:00 and 23:59 on July 1, the actual deduction time will be on July 2. If categorized by deduction</p>

		period, this record belongs to the July 2 invoice; if categorized by billing period, this record belongs to the July 1 invoice.
August 1, 2022	The second release for the second batch of accounts in beta test	<p>(1) Before August 1, 2022, billing is done monthly. The consumption generated between July 1, 00:00 and July 31, 23:59 will be deducted on August 1. If categorized by deduction period, this record belongs to the August bill; if categorized by billing period, this record belongs to the July bill.</p> <p>(2) Starting from August 1, 2022, billing will be done daily. For usage incurred between 00:00 and 23:59 on August 1, the actual deduction time will be on August 2. If categorized by deduction period, this record belongs to the August 2 bill; if categorized by billing period, this record belongs to the August 1 bill.</p>
September 1, 2022	The third release for all accounts	<p>(1) Before September 1, 2022, billing is done on a monthly basis. Consumption generated between August 1, 00:00 and August 31, 23:59 will be charged on September 1. If categorized by deduction period, this record belongs to September's bill; if categorized by billing period, this record belongs to August's bill.</p> <p>(2) Starting from September 1, 2022, billing will be done daily. The consumption generated between 00:00 and 23:59 on September 1 will be deducted on September 2. If sorted by deduction period, this record belongs to the bill of September 2; if sorted by billing period, this record belongs to the bill of September 1.</p>

Therefore, if the monthly usage remained the same, after monthly settlement was upgraded to daily settlement, the bill amount varied by billing statistical period and billable items as follows:

- **Billing by billing cycle:** The monthly fees of storage usage, requests, and data retrievals remain basically unchanged after the upgrade.
- **Billing by deduction cycle:** The monthly fees of storage usage increase after the upgrade, while the monthly fees of requests and data retrievals remain basically unchanged after the upgrade.

In the first month after the upgrade from monthly settlement to daily settlement, the storage fees increased. This was because two bills were generated for billing by deduction cycle. The first bill was the monthly bill for the last month, while the second bill was the daily bill for the current month. Therefore, the bill amount seemed to have increased, but no additional fees were deducted in fact, which was normal under the settlement and billing logic.

In the second month after the upgrade from monthly settlement to daily settlement, your bills were settled daily, and the bill amount "decreased" compared with that in the first month, which was also normal under the settlement and billing logic.

For example, if your account is billed according to the billing cycle and was upgraded from monthly to daily billing on September 1, 2022, you can download the COS L3-Detailed Bill on September 30 from the [Cost Center](#) in the console.

Taking the **COS STANDARD storage usage billable item** as an example, the bills consisted of the monthly bill for August and daily bill for September as detailed below:

- **Pay-as-you-go monthly settlement:** The monthly bill was generated on September 1 for resource usage fees incurred in the entire August (from 00:00 on August 1 to 23:59 on August 31).

D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
724	COS 对象存储	按量计费	默认项目	国内	国内					COS 标准存储	按量计费月结	2022/9/1 08:16	2022/8/1 00:00	2022/8/31 23:59	标准存储存储容量	0.118	元/GB/月	GB	1	月				
838	COS 对象存储	按量计费	默认项目	国内	国内					COS 标准存储	按量计费月结	2022/9/1 08:16	2022/8/1 00:00	2022/8/31 23:59	标准存储存储容量	0.125	元/GB/月	GB	1	月				
770	COS 对象存储	按量计费	默认项目	国际	国际					COS 标准存储	按量计费月结	2022/9/1 08:16	2022/8/1 00:00	2022/8/31 23:59	标准存储存储容量	0.113	元/GB/月	GB	1	月				
823	COS 对象存储	按量计费	默认项目	国际	国际					COS 标准存储	按量计费月结	2022/9/1 08:16	2022/8/1 00:00	2022/8/31 23:59	标准存储存储容量	0.13	元/GB/月	GB	1	月				
865	COS 对象存储	按量计费	默认项目	国内	国内					COS 标准存储	按量计费月结	2022/9/1 08:16	2022/8/1 00:00	2022/8/31 23:59	标准存储存储容量	0.118	元/GB/月	GB	1	月				
857	COS 对象存储	按量计费	默认项目	国内	国内					COS 标准存储	按量计费月结	2022/9/1 08:16	2022/8/1 00:00	2022/8/31 23:59	标准存储存储容量	0.118	元/GB/月	GB	1	月				

- **For pay-as-you-go daily billing:** After the "monthly to daily" billing change takes effect on September 1, daily bills will be issued starting from September 2. These bills cover the daily resource usage fees for the entire month of September. For example, the resource usage fees for September 1 are calculated on September 2, and those for September 2 are calculated on September 3, and so on, until the fees for September 29 are calculated on September 30. (This includes resource usage fees incurred from 00:00 to 23:59 on September 1, September 2, ..., and September 29.)

Due to the large amount of billing data, the following figure only displays the daily bills from September 2 to September 3 as a reference.

D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
838	COS 对象存储	按量计费	默认项目	国内	国内					COS 标准存储	按量计费日结	2022/9/2 08:26	2022/9/1 00:00	2022/9/2 23:59	标准存储存储容量	0.003933	元/GB/天	GB	1	天				
810	COS 对象存储	按量计费	默认项目	国内	国内					COS 标准存储	按量计费日结	2022/9/2 08:26	2022/9/1 00:00	2022/9/2 23:59	标准存储存储容量	0.003933	元/GB/天	GB	1	天				
741	COS 对象存储	按量计费	默认项目	国际	国际					COS 标准存储	按量计费日结	2022/9/3 08:10	2022/9/2 00:00	2022/9/2 23:59	标准存储存储容量	0.004167	元/GB/天	GB	1	天				
854	COS 对象存储	按量计费	默认项目	国际	国际					COS 标准存储	按量计费日结	2022/9/2 08:26	2022/9/1 00:00	2022/9/2 23:59	标准存储存储容量	0.004167	元/GB/天	GB	1	天				
875	COS 对象存储	按量计费	默认项目	国际	国际					COS 标准存储	按量计费日结	2022/9/2 08:26	2022/9/1 00:00	2022/9/2 23:59	标准存储存储容量	0.004333	元/GB/天	GB	1	天				
793	COS 对象存储	按量计费	默认项目	国际	国际					COS 标准存储	按量计费日结	2022/9/3 08:10	2022/9/2 00:00	2022/9/2 23:59	标准存储存储容量	0.004333	元/GB/天	GB	1	天				
809	COS 对象存储	按量计费	默认项目	国际	国际					COS 标准存储	按量计费日结	2022/9/2 08:26	2022/9/1 00:00	2022/9/2 23:59	标准存储存储容量	0.004333	元/GB/天	GB	1	天				
820	COS 对象存储	按量计费	默认项目	国际	国际					COS 标准存储	按量计费日结	2022/9/3 08:10	2022/9/2 00:00	2022/9/2 23:59	标准存储存储容量	0.004333	元/GB/天	GB	1	天				
874	COS 对象存储	按量计费	默认项目	国内	国内					COS 标准存储	按量计费日结	2022/9/3 08:10	2022/9/2 00:00	2022/9/2 23:59	标准存储存储容量	0.003933	元/GB/天	GB	1	天				
853	COS 对象存储	按量计费	默认项目	国内	国内					COS 标准存储	按量计费日结	2022/9/2 08:26	2022/9/1 00:00	2022/9/2 23:59	标准存储存储容量	0.003933	元/GB/天	GB	1	天				
888	COS 对象存储	按量计费	默认项目	国内	国内					COS 标准存储	按量计费日结	2022/9/3 08:10	2022/9/2 00:00	2022/9/2 23:59	标准存储存储容量	0.003933	元/GB/天	GB	1	天				
859	COS 对象存储	按量计费	默认项目	国内	国内					COS 标准存储	按量计费日结	2022/9/2 08:26	2022/9/1 00:00	2022/9/2 23:59	标准存储存储容量	0.003933	元/GB/天	GB	1	天				

Therefore, if your monthly fees increased in the first month after the upgrade from monthly settlement to daily settlement and your bill was generated by deduction cycle, the increase was normal under the settlement and billing logic, and no additional fees were deducted in fact. If you have any questions, [contact us](#) for assistance.

## Why was the storage usage in the bill details (L3) (by deduction cycle) different from that in the usage details after the upgrade from monthly to daily settlement?

If your bill was generated by deduction cycle, in the first month after the upgrade from monthly settlement to daily settlement, you might find that the storage usage fees amount in the bill details (L3) was different from that in the usage details. This was because the bill details (L3) and usage details had different statistics collection logic for the storage usage fees.

The reason is as detailed below:

If your account is billed according to the billing cycle and was upgraded from monthly to daily billing on September 1, 2022, you can download the **COS L3-Detailed Bill** and **Usage Detail Bill** on September 30 from the **Cost Center** in the console.

Taking **COS Standard Storage usage** as an example, the bill will reflect the storage usage consumed in August and the storage usage consumed in September.

1. In the **L3-Detailed Bill**:

(1) **Pay-as-you-go monthly billing**: The "Monthly Bill" issued on September 1st covers the storage usage for the entire month of August (i.e., consumption generated from August 1st 00:00 to August 31st 23:59).

Hence, as shown below, the **average monthly storage of COS STANDARD storage** for the bucket 'asp' from August 1, 2022, to August 31, 2022, is 2,732,799.233 GB (sum of the two monthly settlement records), as detailed in column Y of the following chart.

D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
2	产品名称	计费项	项级备注	地域	可用区	桶名称	桶ID	实例ID	实例名称	实例类型	实例规格	实例ID	计费项	开始时间	结束时间	计费项名称	计费项单位	计费项单价	计费项用量	计费项用量单位	计费项用量	计费项用量单位	计费项用量	计费项用量单位
880	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	002209193243439115097	按量计费	2022/8/1 00:00	2022/8/31 23:59	标准存储	COS 标准存储存储量	0.118	元/GB/月	2732799.233	GB	1	月	
881	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	0022091932434396699093	按量计费	2022/9/1 00:00	2022/9/30 23:59	标准存储	COS 标准存储存储量	0.118	元/GB/月	4876057.15	GB	1	月	

(2) **Pay-as-you-go daily settlement**: After the upgrade from monthly settlement to daily settlement on September 1, a daily bill was generated on each day starting from September 2 for daily storage usage fees incurred in the entire September. The bill generated on September 2 was for fees incurred from 00:00 to 23:59 on September 1, that on September 3 was for fees incurred from 00:00 to 23:59 on September 2, and so on.

As shown in the figure below, the **COS STANDARD storage usage of bucket 'asp'** has a varying **daily average storage** from September 1 to September 29, 2022. The total daily average storage as of September 29 is 79,784,325.88 GB (due to the large number of daily bills, the screenshot only shows a portion of the dates). See column Y in the figure below for details.

D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
87	产品名称	计费项	项级备注	地域	可用区	桶名称	桶ID	实例ID	实例名称	实例类型	实例规格	实例ID	计费项	开始时间	结束时间	计费项名称	计费项单位	计费项单价	计费项用量	计费项用量单位	计费项用量	计费项用量单位	计费项用量	计费项用量单位
880	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	002209193243439115097	按量计费	2022/9/18 08:18	2022/9/18 23:59	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	48.752592	GB	1	天	
881	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	00220919324343968181	按量计费	2022/9/18 08:18	2022/9/18 23:59	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	275246.135	GB	1	天	
882	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	0022090324344542708065	按量计费	2022/9/20 08:20	2022/9/19 23:59	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	275841.28	GB	1	天	
883	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	0022090324344542703541	按量计费	2022/9/20 08:20	2022/9/19 00:00	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	48.75763451	GB	1	天	
884	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	002209053243288508485	按量计费	2022/9/5 08:11	2022/9/4 23:59	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	2745217.404	GB	1	天	
885	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	002209053243288508485	按量计费	2022/9/5 08:11	2022/9/4 00:00	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	48.7550615	GB	1	天	
886	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	002209053243288508485	按量计费	2022/9/5 08:11	2022/9/4 00:00	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	48.754792	GB	1	天	
887	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	002209053243288508485	按量计费	2022/9/5 08:11	2022/9/4 00:00	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	2745875.877	GB	1	天	
888	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	0022091032433098982176	按量计费	2022/9/10 08:12	2022/9/9 23:59	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	48.75591799	GB	1	天	
889	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	0022091032433098989062	按量计费	2022/9/10 08:12	2022/9/9 00:00	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	2748038.531	GB	1	天	
890	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	0022090932433405424841	按量计费	2022/9/9 08:24	2022/9/8 23:59	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	48.75577	GB	1	天	
891	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	0022090932433405424841	按量计费	2022/9/9 08:24	2022/9/8 00:00	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	2747642.281	GB	1	天	
892	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	0022091732434235993292	按量计费	2022/9/17 08:21	2022/9/16 23:59	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	2751138.437	GB	1	天	
893	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	0022091832434338011526	按量计费	2022/9/18 08:17	2022/9/17 23:59	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	48.757371	GB	1	天	
894	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	0022091832434338011526	按量计费	2022/9/18 08:17	2022/9/17 00:00	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	2751709.819	GB	1	天	
895	COS 标准存储	按量计费	默认项目		国内	asp	asp		COS 标准存储	按量计费	按量计费	0022091732434235974826	按量计费	2022/9/17 08:21	2022/9/16 00:00	标准存储	COS 标准存储存储量	0.0039333	元/GB/天	48.757139	GB	1	天	

2. In the **Usage Detail Bill**:

(1) **Daily Usage**: Includes daily usage from the entire month of August to September 20th.

That is, the usage generated daily from August 1st 00:00 to September 19th 23:59.

Hence, from the daily usage details, you can see the **average daily storage of COS STANDARD storage** for the bucket 'asp' from August 1, 2022, to September 19, 2022. Refer to column E in the image below.

Where:

- From August 1 to August 31, the fees were settled monthly. As the statistics collection logics were different, the total of **daily storage usage** in the usage details was different from the **monthly storage usage** in the bill details (L3).

A	B	C	D	E	F
注意：下表展示“对象存储”产品下各个存储桶中所有计费项的每日用量明细					
日期	存储桶名称	子产品名称	计费项名称	计费项用量	计费项用量单位
2022-08-01	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2724040.058 GB	
2022-08-02	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2724461.557 GB	
2022-08-03	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2724981.354 GB	
2022-08-04	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2725657.812 GB	
2022-08-05	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2726337.565 GB	
2022-08-06	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2726862.181 GB	
2022-08-07	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2727176.045 GB	
2022-08-08	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2727712.456 GB	
2022-08-09	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2728192.05 GB	
2022-08-10	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2728697.536 GB	
2022-08-11	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2729275.563 GB	
2022-08-12	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2729955.357 GB	
2022-08-13	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2730597.69 GB	
2022-08-14	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2731201.251 GB	
2022-08-15	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2731803.912 GB	
2022-08-16	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2732483.965 GB	
2022-08-17	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2733113.241 GB	
2022-08-18	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2733770.102 GB	
2022-08-19	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2734475.008 GB	
2022-08-20	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2735070.023 GB	
2022-08-21	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2735591.92 GB	
2022-08-22	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2736173.908 GB	
2022-08-23	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2736854.313 GB	
2022-08-24	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2737704.451 GB	
2022-08-25	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2738453.689 GB	
2022-08-26	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2739184.49 GB	
2022-08-27	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2739886.52 GB	
2022-08-28	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2740558.183 GB	
2022-08-29	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2741499.727 GB	
2022-08-30	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2742136.296 GB	
2022-08-31	asp- [redacted]	COS 标准存储	COS 标准存储存储容量	2742868.36 GB	

- From September 1st to September 29th: daily settlement is applied. Due to the same data statistics logic, the **daily average storage usage** data can correspond to the **average daily storage usage** data in the L3-Detailed Bill. The total average storage usage for the month is 79,784,325.65 GB, which is consistent with the L3-Detailed Bill.

	A	B	C	D	E	F
1	注意：下表展示“对象存储”产品下各个存储桶中所有计费项的每日用量明细					
2						
3	日期	存储桶名称	子产品名称	计费项名称	计费项用量	计费项用量单位
795	2022-09-01	asp	COS 标准存储	COS 标准存储存储容量	2743478.424 GB	
829	2022-09-02	asp	COS 标准存储	COS 标准存储存储容量	2744167.19 GB	
861	2022-09-03	asp	COS 标准存储	COS 标准存储存储容量	2744693.644 GB	
893	2022-09-04	asp	COS 标准存储	COS 标准存储存储容量	2745266.156 GB	
927	2022-09-05	asp	COS 标准存储	COS 标准存储存储容量	2745924.627 GB	
961	2022-09-06	asp	COS 标准存储	COS 标准存储存储容量	2746534.116 GB	
996	2022-09-07	asp	COS 标准存储	COS 标准存储存储容量	2747115.326 GB	
1030	2022-09-08	asp	COS 标准存储	COS 标准存储存储容量	2747691.026 GB	
1064	2022-09-09	asp	COS 标准存储	COS 标准存储存储容量	2748087.265 GB	
1095	2022-09-10	asp	COS 标准存储	COS 标准存储存储容量	2748608.652 GB	
1128	2022-09-11	asp	COS 标准存储	COS 标准存储存储容量	2749215.245 GB	
1159	2022-09-12	asp	COS 标准存储	COS 标准存储存储容量	2749649.43 GB	
1194	2022-09-13	asp	COS 标准存储	COS 标准存储存储容量	2749876.056 GB	
1228	2022-09-14	asp	COS 标准存储	COS 标准存储存储容量	2750068.669 GB	
1264	2022-09-15	asp	COS 标准存储	COS 标准存储存储容量	2750623.484 GB	
1298	2022-09-16	asp	COS 标准存储	COS 标准存储存储容量	2751187.195 GB	
1332	2022-09-17	asp	COS 标准存储	COS 标准存储存储容量	2751758.589 GB	
1364	2022-09-18	asp	COS 标准存储	COS 标准存储存储容量	2752294.893 GB	
1399	2022-09-19	asp	COS 标准存储	COS 标准存储存储容量	2752890.058 GB	
1431	2022-09-20	asp	COS 标准存储	COS 标准存储存储容量	2753413.937 GB	
1464	2022-09-21	asp	COS 标准存储	COS 标准存储存储容量	2753700.729 GB	
1498	2022-09-22	asp	COS 标准存储	COS 标准存储存储容量	2754678.824 GB	
1531	2022-09-23	asp	COS 标准存储	COS 标准存储存储容量	2756055.2 GB	
1564	2022-09-24	asp	COS 标准存储	COS 标准存储存储容量	2756727.025 GB	
1594	2022-09-25	asp	COS 标准存储	COS 标准存储存储容量	2757126.483 GB	
1627	2022-09-26	asp	COS 标准存储	COS 标准存储存储容量	2757616.66 GB	
1660	2022-09-27	asp	COS 标准存储	COS 标准存储存储容量	2758047.485 GB	
1692	2022-09-28	asp	COS 标准存储	COS 标准存储存储容量	2758614.803 GB	
1726	2022-09-29	asp	COS 标准存储	COS 标准存储存储容量	2759214.46 GB	
1735						
1736						
1737						
1738						
1739						
1740						
1741						
1742						
1743						
1744						
1745						
1746						
1747						
1748						

(2) Monthly cost allocation: The sum of the average storage usage in August and the daily storage usage in September. That is, the sum of the average storage usage generated from August 1, 00:00 to August 31, 23:59, and the daily storage usage generated from September 1, 00:00 to September 29, 23:59.

Hence, from the usage details in the monthly bill, it can be seen that for the storage bucket 'asp' from August 1, 2022, to September 29, 2022, the total sum of **COS STANDARD storage usage for average monthly storage and average daily storage** is 5,306,487.1688193 GB. See

column F in the image below for details.

	A	B	C	D	E	F	G	H	I
1	注意：分摊费用，是指按照用量在同一个区域的二级类型中的占比乘以同一区域的二级类型总价								
2	以下数据仅用作统计分析：								
3									
4	日期	存储桶名称	地域	子产品名称	计费项名称	计费项用量	计费项单价	费用分摊(元)	标签键：
20	2022-08	asp-	上海	COS 标准存储	COS 标准存储存储容量	5306487.169 GB			
45									
46									
70									
71									
72									
73									
74									
75									
76									
77									
78									
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97									
98									

Due to differences in data statistics logic, the usage details cost allocation by month cannot correspond to the storage usage data in the L3-detailed bill.

In summary, due to differences in data statistics logic, the L3-Bill Details and the monthly usage in the Usage Details Fee Allocation\_By Month may differ. This situation only occurs in the first month when transitioning from monthly to daily billing and charging by billing cycle, and it will be normal afterward. If you encounter this situation, there is no need to worry, as it is a normal logic.

The actually deducted fees are as displayed in the bill details (L3), and the usage details are for reference only. If you have enabled billing by bucket, you only need to view the bill details (L3); otherwise, you can view the usage and fees of each bucket in the usage details.

## Why are there daily and monthly settlement modes in the transaction details?

Before the upgrade, COS' storage, requests, STANDARD\_IA data retrievals, and ARCHIVE data retrievals are settled monthly, and their monthly settlement details are displayed in the transaction details, while DEEP ARCHIVE data retrievals, traffic, and management features are still settled daily, and their daily settlement details are still displayed in the transaction

details. After the upgrade, all COS billable items are settled daily. For more information, see [Billing Overview](#).

In addition, you can view the L3 bill to check whether the billable items are settled daily or monthly as instructed in [Billing](#).

## Fee Deduction

### Will I be charged immediately after activating COS?

Activating COS is free of charge, and fees will be incurred only after you use it. For billing details, see [Billing Overview](#).

If you upload multiple files in a total size of 1 GB to the STANDARD storage class after activating COS and then view and download them, STANDARD storage, write requests, public/private network upstream traffic, and public network downstream traffic (of about 1 GB) will be generated, and the bill generated on the next day will include the STANDARD storage, STANDARD write request, and public network downstream traffic fees. As the public/private network upstream traffic is free of charge, it will not be included in the bill.

### Will file uploads to COS incur fees?

When you upload a file to COS, the generated **traffic is free of charge**, but the generated **write request** will incur fees, and the **storage usage fees** will be calculated based on the file size. If you access or download the object over the public network, public network downstream traffic fees will be incurred. For billing details, see [Billing Overview](#) and [Pricing | Cloud Object Storage](#).

### Why is my account charged even if I am on the free tier?

If your account is charged even if you have a free tier (STANDARD storage pack), possible causes are as follows:

- Scenario 1: In addition to STANDARD storage usage, **other billable items such as read/write requests and public network downstream traffic** are also generated. As such billable items cannot be deducted from the STANDARD storage pack, they are billed in a pay-as-you-go manner.
- Scenario 2: The specification of your free tier (STANDARD storage pack) is smaller than your actual storage usage. For example, if the specification of your free tier is 50 GB and your actual STANDARD storage usage is 100 GB, the excess of 50 GB will be pay-as-you-go.
- Scenario 3: Your free tier (STANDARD storage pack) has expired, and your STANDARD storage usage will be pay-as-you-go.

For more information, see [Why is my account overdue or charged even if I am on the free tier](#).

## Why are fees still deducted after my data in COS is deleted?

If you no longer use the COS service, you need to delete all the buckets in your account. Please confirm that **all buckets have been deleted**. If you still incur charges after deleting all buckets, it may be due to **daily charges generated from yesterday's usage**. COS storage and request fees are billed daily, meaning today's bill reflects yesterday's usage. You can log in to the [Transaction Details](#) page, click **Details** on the right side of the deduction item, and view the deduction details.

The details about the change from monthly settlement to daily settlement are as follows: Starting from July 1, 2022, the settlement cycle of COS storage usage, request, and data retrieval fees was upgraded from monthly to daily to help you manage fees in a more refined manner. The upgrade was implemented on user accounts in batches and went through a two-month beta test. The release dates of different bill statistical periods are as listed below. For more information, see [Daily Billing for COS Storage Usage, Request, and Data Retrieval and Bills](#).

## How do I deactivate the COS service and stop being charged?

You can deactivate COS or stop its billing as follows:

1. If you decide to stop using COS, you can avoid any further billing by permanently deleting all of your COS data (including incomplete multipart uploads and object versions) as instructed in [Payment Overdue](#). There is no need to remove your account, and if you use other Tencent Cloud products, avoid doing so as it will affect your other services.
2. If you don't use COS for more than one month, you can set lifecycle rules to transition data in STANDARD storage class in the bucket to a colder class such as STANDARD\_IA, ARCHIVE, or DEEP ARCHIVE to reduce storage fees. For more information, see [Setting Lifecycle](#). The transition will generate read requests in the original storage class and write requests in the target storage class, so transition by lifecycle will incur read/write [request fees](#).

### Considerations

- Data, once deleted from the bucket, cannot be recovered, so make backups accordingly.
- If versioning is enabled for the bucket, disable it before deleting data.
- Please pay attention to the billing cycle to avoid overdue payments. If your billing items are settled daily, the bill for the current day will be generated on the day after the cleanup. Once the data is completely cleared, the system will not generate new charges. For more information, see [Billing Cycle](#).
- If your account has overdue payment (i.e., your account balance is below 0), COS services will be suspended after 24 hours, regardless of whether your resource pack is within the validity period.

- If your account has overdue payment and COS services are suspended, the free tier for which your account is eligible won't be available.
- If data in your bucket is blocked for the second time due to non-compliance, it cannot be deleted. [Contact us](#) if you have any questions.

## How will I be charged when storing data in STANDARD\_IA for less than 30 days?

The minimum data storage duration in STANDARD\_IA storage class is 30 days.

Below are the specific rules:

- An object stored less than 30 days is billed by 30 days as described in [Storage Usage Fees](#).
- An object stored more than 30 days is billed by the actual storage duration.

For more details, see [Infrequent Access Storage Pricing](#) and [Storage Usage Billing Method and Calculation](#).

## How will I be charged when storing data in ARCHIVE for less than 90 days?

The minimum data storage duration in ARCHIVE storage class is 90 days.

Below are the specific rules:

- If the storage duration is less than 90 days, it will be calculated as 90 days. For specific billing rules, please refer to [Early Deletion Policy](#).
- If the storage duration exceeds 90 days, the fees will be calculated based on the actual storage period.

For more details, see [Archive Storage Usage](#) and [Storage Usage Billing Method and Calculation](#).

## How will I be charged when storing data in DEEP ARCHIVE for less than 180 days?

The minimum data storage duration in DEEP ARCHIVE storage class is 180 days.

Below are the specific rules:

- If the storage duration is less than 180 days, it will be calculated as 180 days. For specific billing rules, please refer to [Early Deletion Policy](#).
- If the storage duration exceeds 180 days, the fees will be calculated based on the actual storage period.

For more information, see [DEEP ARCHIVE Storage Fees](#) and [Storage Usage Billing Method and Calculation](#).

## What are data retrieval fees in COS?

Data retrieval fees are fees incurred by reading or downloading MAZ\_STANDARD\_IA/STANDARD\_IA data or restoring ARCHIVE or DEEP ARCHIVE data to STANDARD. They are calculated based on the amount of retrieved data. The higher the amount, the higher the fees. If you don't have special storage needs, you can directly use STANDARD, which doesn't involve data retrieval fees.

## What fees will be incurred by copying MAZ\_STANDARD\_IA/STANDARD\_IA data?

Copying STANDARD\_IA data will incur request fees and data retrieval fees and may also incur cross-region replication traffic fees if the destination and source files are in different regions. For the calculation details of such fees, see [Request Fees](#), [Data Retrieval Fees](#), and [Traffic Fees](#).

## Will I be charged for a copy generated by restoring ARCHIVE or DEEP ARCHIVE data in COS?

A copy generated by restoring ARCHIVE or DEEP ARCHIVE data is in the STANDARD storage class and will incur STANDARD storage usage fees.

## How will I be charged for less than 10,000 read/write requests?

The read/write requests are priced by storage class and billed based on the actual quantity, with a minimum billable quantity of 10,000. For more information, see [Pricing | Cloud Object Storage](#) and [Read/Write Requests](#).

## Why are the COS read/write request fees zero?

If the number of requests does not reach the minimum value for fee deduction, the request fees will be zero.

Case Study: Xiao Yun has a storage bucket in the Beijing region with data stored in the STANDARD storage class. In December 2021, the data generated 0.0023 ten-thousand STANDARD read requests. The unit price for STANDARD read/write requests is 0.01 CNY/ten-thousand times. The account has no discount, so Xiao Yun's payable STANDARD read request fee for December is  $0.0023 * 0.01 = 0.000023$  CNY. Since the billing supports up to 2 decimal places, the billable amount for this item is 0 CNY.

Cause: As bills support eight decimal places at most, while fee deduction is accurate down to two decimal places, the system will automatically adjust the accuracy difference. For more information, see [Bills](#).

## Overdue Payment and Service Suspension

## Can I still access and download files in the COS console if my COS service is suspended due to overdue payment?

After the COS service is suspended due to overdue payment, you cannot read or write data from or to COS, but you can top up your account. For more information, see [Payment Overdue](#).

## Why can't I use the COS service after topping up my account to a positive balance?

After topping up your overdue account, the restriction will be lifted automatically within 10 minutes. If the page still shows a restricted status after you've topped up, it may be due to your browser caching the previous page. We recommend you **refresh your browser** or \*\*

# Domain Name Compliance Issues

Last updated: 2026-01-16 16:27:18

## path-style Issues Related to Domain Name

### 1. Whether COS Bucket Supports Using path-style Domain Name?

To ensure the security and stability of the overall service, buckets created after January 1, 2024 do not support path-style domains. Buckets created before January 1, 2024 remain unaffected and continue to support path-style domains, but it is recommended that you prioritize using virtual-hosted-style domains. For details, refer to the notice [COS Bucket Domain Security Management Notice](#).

### 2. How to Determine Whether You Are Using a path-style Domain

- Method 1: Determine via the object URL or access domain.

A path-style domain is in the form of: `cos.<Region>.myqcloud.com/<BucketName-APPID>`.

A virtual-hosted-style domain is in the form of: `<BucketName-APPID>.cos.<Region>.myqcloud.com`.

- Method 2: Determine through logs that the log records of path-style requests meet the following conditions.

The eventSource field: The format of the access domain is similar to `cos.<Region>.myqcloud.com`, for example, `cos.ap-guangzhou.myqcloud.com`.

The eventName field: The event name is not GetService.

### 3. How to Switch from a path-style Domain to a virtual-hosted-style Domain Using the SDK?

COS Mini Program, JavaScript, Node.js, Android, and iOS SDKs support the use of path-style domains. Taking the Mini Program SDK as an example, the steps to switch are as follows:

Step 1: During SDK instantiation, change `ForcePathStyle:true` to `ForcePathStyle:false`, or remove this parameter. For example:

```
new COS({ ForcePathStyle: false })
new COS({})
```

Step 2: For the Mini Program SDK, you also need to configure the bucket domain `<BucketName-Appid>.cos.<Region>.myqcloud.com` as an allowlist domain on the WeChat Open Platform.

## 4. How Errors Will Be Reported When path-style domains are used to access buckets created after January 1, 2024

An example of an error request is as follows.

```
GET /bucket-125000000/test.txt HTTP/1.1
Host: cos.ap-guangzhou.myqcloud.com

HTTP/1.1 403 Forbidden

<?xml version="1.0" encoding="UTF-8"?>
<Error>
  <Code>PathStyleDomainForbidden</Code>
  <Message>The bucket you are attempting to access must be addressed
using COS virtual-styled domain.</Message>
</Error>
```

## Issues Related to Previewing the Default Domain and Download Capabilities

### 1. Does the Default Domain of a COS Bucket Support Previewing Objects and Downloading apk/ipa Files in Browsers?

To ensure the security and stability of the overall service, for buckets created after January 1, 2024, when objects are accessed using COS default domains (including bucket default domains, static website domains, and global acceleration domains), files of any type cannot be previewed, and apk/ipa files cannot be downloaded. For details, refer to the notice [COS Bucket Domain Usage Security Management Notice](#).

For buckets created after January 1, 2024, if users access objects using default domains, COS adds the following two Headers in the response headers, thus preventing direct file preview in browsers when using default domains.

```
x-cos-force-download:true
Content-Disposition: attachment
```

For buckets created after January 1, 2024, if users access apk/ipa files (with file extensions .apk or .ipa) using the default domain, the download request will return an error. An example of the error message is as follows:

```
HTTP/1.1 403 Forbidden
```

```
<?xml version="1.0" encoding="UTF-8"?>
<Error>
  <Code>DownloadForbidden</Code>
  <Message>The APK/IPA file is not allowed to be distributed in a
public network using COS default domain, please use custom domain
instead.</Message>
</Error>
```

## 2. Whether Buckets Created Before January 1, 2024 Support Browser Preview and apk/ipa Download When default domains are used

Buckets created before January 1, 2024 are unaffected by the default domain, but it is recommended that you prioritize using a custom domain.

## 3. Which Default Domains Are Affected?

The bucket domains, static website domains, and global acceleration domains provided directly by COS are all affected.

Domain name	Format Sample
bucket domain	<Bucket-Appid>.cos. <Region>.myqcloud.com
domain for static websites	<Bucket-Appid>.cos-website. <Region>.myqcloud.com
domain for global acceleration	<Bucket-Appid>.cos.accelerate.myqcloud.com

## 4. Does CDN Domain Support Browser Preview, and Do apk/ipa Files Support Download?

- Tencent Cloud CDN

If Tencent Cloud CDN is used with the origin server configured as a COS bucket, the preview and download behaviors via the CDN domain will not be affected. Files of apk/ipa types can be downloaded normally through the CDN domain.

- third-party CDN

If a third-party CDN service pulls content from a COS bucket and the origin is configured with the COS default domain, it will be affected.

## 5. Whether Private Network Access to the Default Domain Supports Browser Preview, and Whether apk/ipa File Types Support Download?

Private network access is unaffected.

## 6. Does Preview Support Exist for Custom Domains in Browsers, and Are Downloads Supported for apk/ipa File Types?

Supported.

## 7. How Can Files in Buckets Created After January 1, 2024, Be Previewed Normally in a Browser?

For buckets created after January 1, 2024, users need to configure a custom domain for the bucket to preview files properly. For custom domain configuration, see [Enabling Custom Origin Domain](#).

Additionally, users need to specify the correct Content-Type header for the file, and the parameter value of Content-Disposition cannot be "attachment". When the browser supports the file format, it will open the file directly instead of downloading it.

## 8. Will the Use of Static Websites Be Affected?

For buckets created after January 1, 2024, accessing for preview via default domains (including static website domains) will be restricted. Consequently, features such as index documents and error documents for static websites will be significantly affected.

To properly use the static website feature, you need to configure a custom domain for the bucket and set the origin to static website. For details, see [Enabling Custom Origin Domain](#).

## 9. How to Download apk/ipa Files Normally for Buckets Created After January 1, 2024?

For buckets created after January 1, 2024, users need to configure a custom domain for the bucket to preview files properly. For custom domain configuration, see [Enabling Custom Origin Domain](#).

# Bucket Configuration Lifecycle

Last updated: 2023-09-19 08:58:01

## How can I modify the storage class for an object?

You can modify the storage class in either of the following ways:

1. You can change the storage class using the console, API/SDK, or tools. For detailed instructions, see [Changing Storage Class](#).
2. By [configuring a lifecycle policy](#), you can transition objects in a bucket or with a specified prefix to another storage class (note that this feature only supports one-way transitions).

## What should I do if an object I deleted still exists?

This may be caused because the object contains special characters. You can [set a lifecycle rule](#) to delete it.

## Can I set an expiration time for my objects in COS?

You can set a lifecycle rule to specify the number of days to transition objects to ARCHIVE or delete them after they are uploaded. For detailed directions, please see [Setting Lifecycle](#). You can also use an SDK to set a lifecycle (see [Android SDK – Lifecycle](#) or [Java SDK – Lifecycle](#)).

## Can objects be automatically cleared regularly?

You can [set a lifecycle rule](#) to automatically transition objects to another storage class or delete them.

## After enabling versioning, how can I manage historical versions?

To manage historical versions of objects, you can enable the option to manage versioned objects by [configuring a lifecycle policy](#), which allows you to transition or delete historical versions of objects.

## How many lifecycle rules can I configure?

You can configure up to 1,000 lifecycle rules for a bucket. For more information, please see [Lifecycle Overview](#).

### Note

Tencent Cloud Object Storage advises against configuring multiple lifecycle rules with conflicting conditions for the same set of objects, as conflicting executions may result

in different billing outcomes.

## When will a lifecycle rule configured take effect?

For any rules set at any time, Tencent Cloud Object Storage will start executing the operation at 00:00 (GMT+8) the next day, based on Beijing time. Since the execution is performed asynchronously, the operation for objects matching the rules uploaded after the setting is usually completed before 24:00 the next day.

For example, you configured a lifecycle rule at 15:00 on the 1st day of the month to delete files one day or longer after they are modified. Then, at 00:00 on the 2nd day, the lifecycle task scans for files that were modified over one day ago and deletes them. Files uploaded on the 1st day will not be deleted at 00:00 on the 2nd day, as the time elapsed since their modification is less than one day. Instead, these files will be deleted at 00:00 on the 3rd day.

## What does "deleting fragments" mean in the context of object storage lifecycle?

In lifecycle configuration, **Deleting incomplete multipart** means to delete incomplete multipart generated by multipart upload. Parts that are uploaded but not merged become incomplete multipart, which take up storage but cannot be downloaded. You can check **Deleting incomplete multipart** as needed.

# Batch operations

Last updated: 2023-09-19 08:43:41

## How can I restore archived objects to STANDARD in batches?

You can do so as follows:

1. Enable the [Inventory](#) feature. Then, generate an inventory file for objects that need to be restored to STANDARD, and wait for the inventory file to be generated.
2. Create a task that restores archived objects in batches. When configuring the task, select the inventory file and set the copies' effective period (e.g., 7 days). For detailed directions, please see [Batch Operation](#).
3. As the data volume is large, the restoration may take a long time. You can wait for 48 hours after the task is created for the restoration to complete. After this, you can generate and download the inventory for filtering. You need to remove STANDARD objects in the inventory file and keep only the archived objects. Then, upload the modified inventory file to COS.
4. Create a batch replication task. When configuring the task, select the newly uploaded inventory file, set the storage class to STANDARD, and wait for the task to complete.

## Does COS have the batch compression feature?

COS does not currently support batch packaging. It only supports automatic decompression of files to a specified bucket and path after adding a decompression rule to the bucket using a cloud function. For more information, please refer to [Setting up File Decompression](#).

## How can I obtain the inventory file for the batch operation task?

You can obtain the inventory file in either of the following ways:

- Use the [COS Inventory](#) feature to generate an inventory. Once it's generated, you can fetch the `manifest.json` file from the specified bucket.
- Save files that need to be processed in a local `CSV` file and then upload it to COS. Fields required are shown below. For more information, please see [Inventory Overview](#).

```
Bucket,Key,VersionId  
examplebucket-1250000000,testFile.txt,testVersionId
```

## Why is my data not restored after the batch archived file restoration task is completed?

After the restoration request is sent, the backend will restore files to STANDARD in sequence according to the restoration mode. However, there is a time difference. The completion message displayed in the frontend only indicates that all restoration requests are sent, but not the completion of the restoration task. You can wait for a while and then log in to the console to view the status.

# Origin-pull

Last updated: 2023-09-19 08:44:11

## What is COS origin-pull?

When the data you want to access is not stored in COS, you can use COS' s origin-pull feature to pull data from a specified origin server (e.g., a local IDC, or the origin server/bucket of other cloud vendors).

Origin-pull is mainly used for hot data migration, redirection for specified requests, and other scenarios. You can configure it as needed. For detailed directions, please see [Setting Origin-Pull](#).

After an origin-pull rule is set, if the requested object does not exist in the bucket, the object can be found from the configured origin server address using the origin-pull rule and returned to the user. Likewise, when you need to redirect specific requests, the origin-pull rule can be used for COS to access data in the origin server.

## How can the client know whether a COS request pulls from an origin server?

If the origin-pull is asynchronous, after origin-pull is configured, 302 will be returned for the first COS request, and the client' s second request will be forwarded to the origin server. If the origin-pull is synchronous, COS will pull data from the origin server in real time and return it to the client, and also dump the data to the server.

## How will I be notified after the offline origin-pull upload succeeds?

SLA of the offline origin-pull module is not always successful. If you want to know whether the origin-pull upload is successful, you can go to the SCF console to set a callback that is triggered by the offline origin-pull. For more information about SCF' s COS triggers, please see [COS Trigger](#).

## What is an origin-pull address for?

An origin-pull address is usually an IP or a domain name. It specifies where the data you need to pull is stored. When COS does not have the resource you want to access, you can use the origin-pull address to pull the resource in real time.

## After origin-pull is configured, if COS does not have the resource/path corresponding to the origin-pull address, will COS upload the resource and create a path after the user' s initial access?

Yes. COS will pull the resource automatically and create a path.

## What is asynchronous origin-pull?

Async origin-pull does not directly return the file; instead, it returns a 302 status code to the client first and then asynchronously uploads the file to COS.

1. We recommend you enable **Follow 302** to pull data from the origin.
2. File upload times are affected by various factors, and SLA cannot be guaranteed. Users with time-sensitive requirements are advised to choose synchronous origin-pull.

# Hotlink protection

Last updated: 2023-09-19 08:44:35

## How can I prevent my COS files from hotlinking?

1. If your files are accessed through a browser, you can use the hotlink protection feature to configure an allowlist or blocklist. For detailed directions, please see [Setting Hotlink Protection](#).
2. If your objects are accessed directly via URLs anonymously, you can [add a bucket policy](#) to set the IP allowlist/blocklist. For more information, please see [Access Policy Language Overview](#).
3. For signed requests, configuring a blocklist or allowlist is not supported.

## What do I do if the hotlink protection configuration does not take effect when I use a CDN acceleration domain name to access resources?

If you use a CDN acceleration domain name to access resources, factors such as CDN cache may affect the stability of hotlink protection in COS. In this case, you are advised to log in to the [CDN console](#) to configure hotlink protection. For detailed directions, please see [Hotlink Protection Configuration](#).

## Can I use an allowlist and also allow accessing the file by opening the URL in a browser?

When setting hotlink protection, you can choose to allow empty referer, so that the file can be accessed by opening its URL in a browser even if an allowlist is configured.

## The whitelist of hotlink protection for the bucket "test" is set to allow access to `a.com`, but the Web Player under `a.com` cannot play video files under the bucket "test".

When you play videos on websites using players such as Windows Media Player or Flash Player, if the request referer is empty, the allowlist will not be hit. Therefore, you can allow empty referer when configuring the allowlist.

## How can I allow accessing COS files only via a corporate network?

You can set hotlink protection for your bucket by configuring an allowlist or blocklist to restrict access sources. Currently, domain names, IP addresses, and wildcard (\*) formats are supported. For detailed information and instructions on hotlink protection, please refer to [Setting Hotlink Protection](#).

**Note**

- If a CDN acceleration domain name is used for accessing, CDN hotlink protection rules will be executed before COS ones.
- If a signature is carried in the access URL or headers, hotlink protection-based verification will not be performed.

## What do I do if “You are denied by bucket referer rule” is reported when I access objects via a browser?

This error message indicates that your access is denied by the hotlink protection rules set for your bucket. You can check whether your access complies with the hotlink protection rule. If you access with a browser, empty referer should be allowed. Otherwise, accessing via a browser directly will not be available.

## How can I allow only specific IPs to access COS resources?

You can use the hotlink protection feature to configure an IP allowlist. In this case, IPs not included in the allowlist cannot access your COS resources. For detailed directions, please see [Setting Hotlink Protection](#).

# Cross-origin Access

Last updated: 2023-09-20 11:31:42

## What is CORS, and how do I enable it?

Cross-origin resource sharing (CORS) is to request resources over HTTP from a domain for another domain. Two origins that differ in protocol, domain name, or port are treated as different origins. To enable cross-origin access, see [Setting Cross-Origin Access](#) or the best practice documentation [Setting Cross-Origin Access](#).

## What should I do if COS denies my access request with headers in the allowlist after I configure CORS?

If your access request is denied, troubleshoot the issue as follows:

1. Check that your configuration is consistent with the headers your request includes, especially for the presence of invisible characters, such as spaces.
2. Check the domain name with which you initiate the request. If you use a CDN acceleration domain name, you need to configure CORS in the CDN console. For operation details, see [HTTP Response Header](#).
3. Check the permissions of your bucket and determine whether your access will be granted.
4. Inspect your browser cache, as the error may be caused by cached data. You can resolve this issue by pressing Ctrl+F5 to force-refresh the browser or by selecting Disable cache in the browser's **Network** tab.

## How do I configure the file headers in the bucket to return "Access-Control-Allow-Origin: \*"?

Set the origin to `*` when configuring CORS. For more information, see the best practice documentation [Setting Cross-Origin Access](#).

## What should I do if the error "get ETag error, please add ETag to CORS ExposeHeader setting." occurs during an upload operation?

Please configure CORS rules as shown in the image below, try switching browsers, and test if it works. For more information, see [Setting Cross-Origin Access](#).

### Add CORS Rule

Origin \*

Domain begins with http:// or https://. One domain per line. Up to one wildcard character \* is allowed in a line

Allow-Methods \*  PUT  GET  POST  DELETE  HEAD

Allow-Headers

When you send an OPTIONS request, tell the server which custom HTTP request headers you can use for the next request, such as X-COS-META-MD5

Expose-Headers

The Expose-header returns the usual cosine Header

Max-age \*  s

Options request gets the validity of the result, which must be a positive integer.

Return Vary: Origin

Sets whether to return "Vary: Origin Header". If the browser has both CORS and non-CORS requests, enable this option or cross-domain problems may occur. If "Vary: Origin" is selected, browser access or CDN origin-pull may increase.

## What should I do if both COS and CDN are used but CORS does not work in COS?

If you are using a CDN acceleration domain name, configure CORS in the CDN console. For operation details, see [HTTP Response Header](#).

## Does CORS configuration support fuzzy match of origins?

The console supports fuzzy match of second-level domain names.

## What should I do if COS CORS reports an error?

Please troubleshoot the issue as follows:

1. Check that CORS rules are configured in the COS console. For operation details, please see [Setting Cross-Origin Access](#).
2. Check whether a CDN acceleration domain name is used. If yes, you need to configure CORS rules in the CDN console. For operation details, please see [HTTP Response Header](#).

3. To test if the CORS rule is effective, use the command line with the following format: `curl -Lvo /dev/null "<object_url>" -H "origin:<domain>"` . Replace the values in `<>` according to your business requirements, for example: `curl -Lvo /dev/null "https://bucketname-1250000000.cos.ap-guangzhou.myqcloud.com/test.png" -H "origin:https://www.baidu.com"` . If the returned status code is 200, the rule is effective. Clear your browser cache and try again.
4. If the problem persists, try to configure `max-age=0` in the CORS rules.

## Can I add IP addresses to CORS rules?

CORS rules support IP addresses. For more information, see [Setting Cross-Origin Resource Sharing \(CORS\)](#).

## What should I do if a CORS error is reported when I use CDN to access files in COS although CDN has been configured in COS?

Enable CORS in the CDN console. For operation details, see [HTTP Response Header](#).

## What should I do if a CORS error is reported when I access file URLs?

Verify that CORS is configured correctly. If so, clear your browser cache and try again. If the issue persists, consider setting `max-age=0` in the CORS rules. For guidance on configuring CORS, see [Setting Cross-Origin Access](#).

# Inventory

Last updated: 2023-09-19 08:45:46

## How can I know whether an inventory file has been delivered successfully?

When an inventory file is generated depends on your configuration. If you have selected “daily” , the inventory file will usually be delivered early in the morning on the next day (Beijing time). If you have selected “weekly” , the inventory file will be generated and delivered on the last day of the current week in most cases.

If you want to receive a notification after the inventory file has been successfully delivered, you can configure a COS trigger in the [Cloud Function](#) console and set the event type to **Complete Inventory Report Delivery Event**.

## How can I analyze an inventory report?

After an inventory report is generated, you can use the [COS Select](#) feature to filter information in the inventory. The following are some examples:

### 1. Filtering files whose storage class is STANDARD:

```
select * from cosobject s where s._7 = TO_STRING('Standard')
```

### 2. Filtering files smaller than 5 GB:

```
select * from cosobject s where s._4 < 5 * 1024 * 1024
```

### 3. Filtering files larger than 5 GB and use the STANDARD storage class:

```
select * from cosobject s where s._4 > 5 * 1024 * 1024 AND  
s._7 = TO_STRING('Standard')
```

### 4. Filtering files whose status is “replica” (indicating the replication has been completed):

```
select * from cosobject s where s._9 = TO_STRING('replica')
```

### 5. Viewing the first 100 records in the inventory report:

```
select * from cosobject s limit 100
```

## How can I export all file information?

You can [enable inventory](#) for your bucket. In this way, COS will regularly (daily/weekly) publish an inventory report that contains the object attributes and configuration details.

### Note

- Currently, the inventory feature is not available for Finance Cloud regions.
- The inventory feature incurs **Management feature fees**. For detailed pricing, please see [Product Pricing](#).

## How can I get a file list?

You can obtain the file inventory in COS using the following methods:

1. Use the COS console to [enable inventory](#) for your bucket. The inventory feature allows you to regularly (daily/weekly) publish inventory reports about the object attributes, configurations, and more. For more information about inventory, see [Inventory Overview](#).
2. Call the [GET Bucket \(List Objects\)](#) API to obtain a list of all objects. The returned list is in XML format, which can be processed as needed.

## Can I reset the inventory configuration immediately after I found out I set it incorrectly?

COS will regularly read the latest inventory task configuration in the early morning and then start executing the task. You can modify the inventory configuration before execution and wait for the next day's early morning to re-read the inventory task configuration before starting the task.

## Does COS support counting file quantity by file type?

You can use the [inventory feature](#) to regularly (daily/weekly) scan specified objects or objects with a specified prefix in a bucket, output an inventory report, and save the CSV file to a specified bucket. After this, you can use “fileFormat” to filter objects by file type and count the quantity.

## How can I compare a local file and the one stored in COS?

You can obtain the MD5 of a single object or multiple objects using HEAD Object and List Object requests, and compare them with the MD5 of local files. For large-scale buckets, you can use the [Inventory feature](#) to asynchronously obtain the object list and their MD5 values. For operational guidance, please refer to the [Enabling Inventory Feature](#) console documentation.

## How can I export an XLS file that contains the COS filename, file size, and object URL?

You can enable the inventory feature to automatically output an inventory report, and save the CSV file to a specified bucket. With the inventory feature, you can obtain the file path, file size, last modified time, ETag, storage class, and other information. An object URL can be obtained by combining the bucket's region and the file path. For more information, please see [Inventory Overview](#).

## How can I see the number of files in a folder and the storage they take up?

If there are not a lot of files in the folder, you can use the console to view the folder details, which include the number of files as well as the storage they take up. If the number of objects in your bucket is greater than 10,000, you are advised to query using the [inventory feature](#).

# Deleting Buckets

Last updated: 2025-03-07 09:44:15

## Does It Support Deleting Buckets In Batches?

Unsupported. If needed, refer to [Documentation](#) to delete individually via the console, tool, API, or SDK. Or call the [DELETE Bucket](#) API in a loop.

## Is It Possible To Delete Files From a Bucket On a Specified Date?

Not supported. If needed, you can develop to meet your requirement through the API interface. First, [list objects](#), then filter the resources to be deleted by time, and then call the [DELETE Object API](#) to delete.

## Version Control Is Enabled, Making It Impossible To Empty the Bucket or Perform Complete Deletions. How Can This Be Resolved?

First, you need to suspend the version control feature of the bucket (for details, see [Setting Versioning](#)), and then [Setting Lifecycle](#) to delete all objects in the bucket (including historical version objects).

## Will There Be a Fee If No Files Are Uploaded To an Empty Bucket?

If you do not delete a bucket, even if there are no files in it, normal request fees will still be incurred as long as someone knows the bucket link and sends a request. To save costs, it is recommended to regularly manage and optimize the use of buckets.

## Will Deleting a Bucket Incur a Fee?

Yes, the deletion operation is a write request.

## How To Handle the Situation Where the Bucket Cannot Be Deleted Due To Arrears?

After arrears exceed 24 hours, COS cannot be read normally. You can top-up at the [Billing Center Console](#) before entering the COS console to delete resources.

## Unable To Cancel the Account, Account Resource Check Prompts That the Bucket Needs To Be Deleted, How To Handle It?

The appearance of this note indicates that you have previously enabled the TCB Cloud Development Service. If you encounter this situation, please refer to the following steps to proceed:

1. Confirm whether you have used the TCB cloud development service. If so, please ensure that you have [deleted the relevant cloud development environment](#).
2. Confirm if there are any buckets in your bucket list that have not been deleted. If the bucket list is not empty, then [all buckets need to be deleted](#).
3. After completing the above two steps, please wait for 1 hour before proceeding with the [account cancellation](#) operation.

If you still cannot cancel your account, please [submit a ticket](#) for help.

# Domain Names and CDN Static Websites

Last updated: 2023-09-19 08:46:23

## What should I do if I failed to set a custom domain in the COS console?

1. Please first verify if the domain name has an ICP filing.
2. Confirm if the DNS resolution of the domain name is correct by using the [Domain Check Tool](#). When CDN acceleration is disabled, you need to preconfigure the domain name to CNAME to the storage bucket's [default domain](#) in the DNS resolution console.

## What's the difference between enabling and disabling CDN acceleration if I have my own domain bound?

- **Enabling CDN acceleration:** The domain is managed by CDN. Enabling CDN acceleration in the COS console has the same effect as adding a domain name (with COS as the origin) in the [CDN console](#). When resolving the domain name, users need to use the CNAME record assigned by CDN. To configure, add the domain name first, then resolve the domain name. For domain name resolution, refer to [Quickly Add Domain Name Resolution](#).
- **CDN acceleration disabled:** The domain name is managed by COS. The domain name configuration is delivered to all download devices connected to the region where the bucket resides. The default domain name of the bucket is used as the CNAME record for DNS resolution.

## Why does the `Content-Disposition` header I set for the object not take effect?

Other custom headers can take effect once set. However, `Content-Disposition` takes effect only if the static website feature is enabled, and you access the object with a custom domain.

## What should I do if a static website cannot be accessed by using a CDN domain name?

Check the configuration of the CDN-accelerated domain name in the following steps:

1. Select **Static Website Endpoint** as the origin type.
2. Set origin-pull authentication and CDN service authorization based on the bucket permission:
  - If the bucket permission is private read, authorize the CDN service and enable origin-pull authentication.

- If the bucket permission is public read, there is no need to authorize the CDN service or enable origin-pull authentication.

### 3. Set CDN authentication based on the bucket permission:

#### 1. If the bucket is set to private-read:

CDN Authentication	Access with CDN Acceleration Domain Name	Access with COS Domain Name	Use Case
Disabled (default)	Inaccessible	COS authentication is required	Allowing direct access to CDN domain names to protect the content on the origin
Enabled	URL authentication is required	COS authentication is required	Securing access comprehensively (hotlink protection for CDN authentication is supported)

#### 2. If the bucket is set to public-read:

CDN Authentication	Access with CDN Acceleration Domain Name	Access with COS Domain Name	Use Case
Disabled (default)	Yes	Yes	Allowing all public access to the entire website via the CDN or origin
Enabled	URL authentication is required	Yes	Enabling hotlink protection for access via the CDN but not the origin server (not recommended)

- ### 3. After confirming that the above configurations are correct, check the protocol used to access the CDN acceleration domain name and the **forced HTTPS** configuration of the static website:

- If you are using the HTTP protocol to access the CDN acceleration domain name, **do not enable forced HTTPS**.
  - If you are using the HTTPS protocol to access the CDN acceleration domain name, we recommend you **enable follow 301/302** for the CDN acceleration domain name. For more information, see [Follow 301/302 Configuration](#).
4. If the problem persists after you perform the steps above, you can [contact us](#).

## What should I do if 404 is returned on refresh if the static website is used together with the frontend Vue framework and the router is set to History mode?

On the static website configuration page of the bucket, set the error document path to the landing page of the web application (mostly index.html) and set the status code of the error document to 200. For the configuration directions of static websites, please see [Setting Up a Static Website](#).

### Note

After completing the configuration using the above method, if you still need to implement the normal 404 response functionality, you can set it up yourself at the bottom layer of Vue's frontend routing configuration (usually by using a wildcard match to a custom 404 component).

# CDN Acceleration Domain Names

Last updated: 2023-09-19 08:46:58

## How to activate CDN for COS?

For more information, see [Enabling Custom CDN Acceleration Domain](#).

## Does COS support CDN origin-pull with HTTPS?

Yes. For detailed instructions, see [Setting Origin-Pull](#) documentation.

## What is the difference between COS and CDN?

COS and CDN are two different products.

[Cloud Object Storage \(COS\)](#) is a distributed storage service provided by Tencent Cloud for storing massive amounts of files. It allows you to upload, download, and manage files in various formats, enabling large-scale data storage and management.

[Content Delivery Network \(CDN\)](#) consists of high-performance acceleration nodes distributed across the globe. These nodes store your business content according to specific caching policies. When a user requests access to your content, the request is directed to the nearest service node, which quickly responds, effectively reducing access latency and improving availability.

You do not have to enable CDN when using COS. Using CDN in COS applies to the following scenarios:

- Low latency and fast downloads are required.
- GB- to TB-level data needs to be transferred across regions, countries, or continents.
- Scenarios where the same content needs to be downloaded frequently and repeatedly.

For more information, see [CDN Acceleration Overview](#).

## Can front-end businesses access the content of COS by means of CDN and temporary key?

No. If you want to use CDN to access COS with private read/write permission on COS, see [CDN origin-pull authentication](#).

## Can I access private-read buckets via CDN acceleration?

Yes, but you need to be authorized with related configurations first. For more information, see [Private-read buckets](#).

## When a file is updated (re-uploaded or deleted) on COS, its cached content remains unchanged in CDN, resulting in inconsistency with the

## **origin server. Can the cache in CDN be refreshed automatically when the file on COS is updated?**

COS itself does not support automatic purging of CDN cache, a feature you should use with the help of Serverless Cloud Function (SCF). For more information, see [CDN Cache Purging](#).

## **Can I use COS to upload files via a CDN acceleration domain name?**

It is recommended that you do not use a CDN acceleration domain name as a custom domain name to upload files, because CDN itself is not used for accelerated upload. You are recommended to use the global acceleration feature of COS to accelerate data upload and download. For more information on global acceleration, see [here](#).

## **Does COS come with the CDN feature?**

COS itself does not include CDN functionality; users need to configure it manually. For more information, see [Enabling Custom CDN Acceleration Domain](#).

# Custom Origin Domain Name

Last updated: 2023-09-19 08:47:32

## How do I access objects with my own domain name?

You can do so by binding a custom domain name. For more information, see [Enabling Custom Origin Domain Name](#).

## Do I need to obtain an ICP filing from Tencent Cloud if I use a custom domain name?

It depends on the following requirements:

- For content delivery in the Chinese mainland, ICP filing is required. You are not required to do so through Tencent Cloud though.
- If your domain name is connected to a CDN node outside the Chinese mainland, you don't need to obtain an ICP filing for it.

## Do custom domain names in COS support HTTPS?

The feature of configuring HTTPS for custom COS domain names is being upgraded. Currently, certificate hosting is supported in public cloud regions in the Chinese mainland, Singapore, and Silicon Valley, with more regions to come. For unsupported regions, you can configure a reverse proxy for the domain name by referring to [Supporting HTTPS for Custom Endpoints](#).

## How does COS return the access links of custom domain names after files are uploaded?

COS currently does not support this feature. However, you can implement it by concatenating access links and using custom domain names to replace default domain names. For more information, see [Regions and Access Endpoints](#).

## Do I have to enable CDN if I use custom domain names to access COS?

You do not have to enable CDN to access COS with custom domain names. You can log in to the [COS console](#) to set custom endpoints. For operation details, see [Enabling Custom Endpoints](#).

## Why does the original custom domain name disappear from the COS console when the origin is changed in the CDN console?

If you use the COS V5 console and a JSON domain name is configured, the COS V5 console cannot display the new domain name. Check whether the JSON domain name is configured in

your bucket. If so, change the JSON domain name to an XML domain name.

## **Do I need to remove the resolution configuration from the lightweight server before binding a custom domain name to a COS bucket?**

Only one CNAME record can be configured for a domain name. Therefore, you need to delete the resolution relationship between the domain name and the lightweight server first and then bind the domain name resolution relationship to the COS bucket.

## **What should I do if the system indicates that domain name resolution or CNAME is not in effect?**

After being configured, domain name resolution or CNAME may take several minutes to take effect. You can wait a while and try to access your bucket using your custom origin server domain name again. If the problem persists, you can log in to your DNS console to check whether the resolution relationship is configured correctly.

# Object Operations

## Upload and Download

Last updated: 2025-07-04 14:56:11

### How to Upload Objects to COS

Cloud Object Storage (COS) supports the following object upload methods:

1. Upload objects via the [COS console](#) on the bucket file list webpage. For detailed operations, refer to the [Object upload](#) document.
2. Upload using the tool provided by COS. For COS tools, see [COS Tool Overview](#).
3. Upload via the [PUT Object](#) API or SDK. For supported SDK languages, see [SDK overview](#).

### Uploading Files to COS but Unable to Access, What to Do?

If you cannot access files after uploading them to COS, refer to the following steps for troubleshooting.

#### Step One: Use COS Diagnosis Tool to Determine

[COS Self-Diagnosis Tool](#) can automatically detect based on the input RequestId and provide diagnostic prompts and a help guide. To obtain the RequestId, see [RequestId Operation Guide](#).

#### Step Two: Check Access Permission Configuration

- When uploading files, if public read/private write access permission is not specified, the file's access permission is inherited by default from the bucket. For example, if the bucket access permissions are private read/write, the file's access permissions will be the same. You can view object permissions in the [file detail](#) of the file list.
- To access a file with private read/write permissions, you need to carry a [valid signature](#). If you access the object address directly without a valid signature, an AccessDenied error will be reported.
- The object address format without a signature is: `https://<BucketName-APPID>.cos.<Region>.myqcloud.com/<ObjectKey>`.
- The object address format with a signature is `https://<BucketName-APPID>.cos.<Region>.myqcloud.com/<ObjectKey>?q-sign-algorithm=sha1&q-ak=AKXXX&q-sign-time=1704855332;1704858932&q-key-time=1704855332;1704858932&q-header-list=host&q-url-param-list=&q-signature=XXX&x-cos-security-token=XXX`.
- To access a file with "public-read/private-write" permissions, no signature is needed for direct access. In this scenario, any user can download the object directly through the

object URL without identity verification. However, note that making resources publicly readable poses security risks. Once the resource URL is leaked, anyone can access it, possibly leading to traffic theft by malicious users. For more information, see [COS authorization and identity verification process](#).

### Step Three: Check Domain Configuration

- If you use a custom domain name to access COS, domain resolution issues may exist. Ensure the domain resolution is correct. The error message is `UserCnameInvalid`. Please check whether DNS resolution is correct or whether it has taken effect (normally takes no more than 48 hours). If you host a static website on COS, select **static website origin server** when configuring COS. For relevant guidelines, see [enable custom origin site domain](#).
- If the global acceleration domain name encounters a DNS resolution temporary exception, recommend users to use [private network global acceleration domain](#).

### Step Four: Check Hotlink Protection Configuration

If the error `You are denied by bucket referer rule` appears, it means the referer parameter in your access does not match the hotlink protection settings. You can disable hotlink protection or ensure your request carries the referer parameter. For the operation guide, see [Setting Hotlink Protection](#).

### Step Five: Check COS Configuration in Third-Party Storage Component

If you use a third-party storage component (such as PicGo) to integrate with COS, please check whether there is an error in the COS configuration. Reference [Using COS in Third-Party Applications](#).

### Step Six: Check Other Items

- Video playback exception when uploading to COS. See [unable to play video normally when accessing](#).
- If the account is in arrears, images and other files cannot be opened.
- File upload may be incomplete, making files inaccessible. Please ensure complete multipart upload to COS.

## How to Download Objects From COS

For details, see [Download Object](#).

## Does COS Limit the Upload and Download Bandwidth?

- Public cloud in the Chinese mainland region: single-account single-region default bandwidth uplink and downstream are 15Gbit/s each.

- Other regions: single-account single-region default bandwidth uplink and downstream are 10Gbit/s each. If bandwidth reaches this threshold, the request will trigger flow control. If you have higher bandwidth requirements, contact [after-sales engineer](#).

## How Can I Directly Preview a File In My Browser without Downloading It?

### Step One: Configure Custom Domain Name

For buckets created after January 1, 2024, if you use default domain names (including default bucket domain name, static website domain, and global acceleration domain) to access files, any type of file will not support preview but direct download. For details, see [COS Bucket Domain Name Security Management Notification](#). If you wish to preview files directly through a browser or download objects of apk or ipa type in the bucket, access the objects through a custom domain name.

### Step 2: Configure the correct Content-Type and Content-Disposition headers

Ensure the Content-Type header is configured correctly when requesting a COS file, and the Content-Disposition header parameter value is set to `inline` (means the browser should attempt to open the content). When the browser supports the current file format, it will directly open the file rather than download it. For header parameter configuration, see [Custom Headers](#).

## How do I directly download a file in my browser without previewing it?

You can go to the [COS console](#) and set the Content-Disposition parameter value in the custom object Headers to attachment (means the browser should prompt user to download the Content). For instructions, please refer to [Custom Headers](#).

You can achieve this by setting the value of the response-content-disposition parameter in the GET Object API to "attachment", which will prompt the browser to download the file. For reference, please see [GET Object](#).

#### Note:

To use the response-\* parameter in a request, the request must be signed.

## How do I determine if I am accessing COS over a private network?

Tencent Cloud COS adopts intelligent resolution for COS endpoints. In this way, the optimal linkage can be provided for you to access COS with different ISPs.

If you have deployed a CVM within Tencent Cloud for accessing COS over a private network, you must first ensure that the CVM resides in the same region as the COS bucket, then use the `nslookup` command on the CVM to resolve the COS endpoint. If a private IP is returned, access between the CVM and COS is over a private network; otherwise, it is over a public network.

**Note:**

If you access COS service through CVM, use default Tencent Cloud private network DNS address to access over the private network. Do not change CVM service settings as much as possible to avoid private network resolution failure causing connection failure to COS.

If your CVM service deployed in Tencent Cloud is in a different region from the COS bucket but within the available COS regions, you can access files via the COS private network global acceleration domain to achieve cross-region private network access between CVM and COS. Cross-region private network access via the private network global acceleration domain may incur additional fees. For details, see [Private Network Global Acceleration](#).

**Determining a Private Network Access**

Tencent Cloud products within the same region can access each other over a private network, incurring no traffic fees. Therefore, we recommend choosing the same region when you purchase different Tencent Cloud products to save on costs.

**Note:**

Private networks in public cloud regions and financial cloud regions are not interconnected.

The following shows how to determine access over a private network:

For example, when a CVM accesses COS, to determine whether a private network is used for access, use the `nslookup` command on the CVM to resolve the COS endpoint. If a private IP is returned, access between the CVM and COS is over a private network; otherwise, it is over a public network.

**Note:**

Private IP addresses generally take the form of `10.*.*.*` or `100.*.*.*`, while VPC IP addresses typically take the form of `169.254.*.*`. Both forms belong to the private network.

Assume that `examplebucket-1250000000.cos.ap-guangzhou.myqcloud.com` is the destination bucket address. After executing the `nslookup` command, you can see the following information:

```
nslookup examplebucket-1250000000.cos.ap-guangzhou.myqcloud.com
```

```
Server:          10.138.224.65
Address:         10.138.224.65 #53
```

```
Name: examplebucket-1250000000.cos.ap-guangzhou.myqcloud.com
Address: 10.148.214.13
Name: examplebucket-1250000000.cos.ap-guangzhou.myqcloud.com
Address: 10.148.214.14
```

Among them, `10.148.214.13` and `10.148.214.14` represent access to COS through private network.

For more information on private and public network access and connectivity testing, see [COS Access via Private Network and Public Network](#).

For the private DNS server addresses of CVM, see [Private Network DNS](#).

#### Note:

Tencent Cloud Blackstone machine private IP addresses differ from CVM IP addresses, typically in the format `9.*.*.*` or `10.*.*.*`. If you have any questions, please [contact us](#).

## How do I download a folder?

You can log in to the [COSBrowser tool](#), select the folder you want to download, and click **Download** to download the folder or multiple files. Alternatively, you can use the COSCMD, COSCLI tool to download folders. For more information, please refer to [COSCMD Tool](#) and [COSCMD Tool](#).

## What should I do if the error "403 Forbidden" occurs or access permission is rejected when I perform upload/download and other operations?

You can troubleshoot by referring to [403 Error for COS Access](#).

## How do I upload or download multiple files using COS?

COS allows you to upload or download multiple files through various methods such as the console, APIs/SDKs, and tools.

- Console: For detailed directions, see [Uploading Objects](#) and [Downloading Objects](#).
- APIs/SDKs: COS allows you to operate on multiple files programmatically by repeatedly calling an API or SDK. For more information, see [APIs for object uploads/downloads](#) and [SDK Overview](#).
- Tools: You can use tools such as [COSBrowser](#), [COSCMD](#), and [COSCLI](#) for batch operations.

## **When I upload a new file to a bucket in which another file of the same name exists, will the another file be overwritten or will the new file be saved with a different version name?**

The versioning feature is now available in COS. If versioning is not enabled for the bucket, when you upload a new file to a bucket in which another file of the same name already exists, the latter will be directly overwritten; if versioning is enabled, multiple versions of the object will co-exist.

## **What is the lower limit for the part size of a multipart upload in COS?**

1 MB. For more information, see [Specifications and Limits](#).

## **When uploading large files using multipart upload, can I replace an invalid signature to continue the multipart upload?**

Yes.

## **How do I generate a temporary URL for files in COS?**

For more information, see [Download via Pre-Signed URL](#).

## **I have set a validity period for a signature, but why can it still be used to download objects after it has expired?**

By default, browsers cache successfully loaded files, so when using the same URL, the browser will return the cached result instead of re-requesting the server. It is recommended to prevent browser caching by specifying the Cache-Control: no-cache header when uploading files. Refer to [PUT Object](#) or [Initiate Multipart Upload](#) documentation for more information. Alternatively, you can prevent browser caching when downloading files by specifying the response-cache-control=no-cache request parameter. Refer to [GET Object](#) documentation for more information.

## **What should I do if I upload a file on the console and "Failed to upload. System error." is displayed?**

This error may occur due to an unstable local network environment. Try uploading again in a different network environment.

## **How do I prevent others from downloading my COS files?**

To do so, you can set your bucket permission to private read/write. For more information, see [Setting Access Permission](#). You can also configure a hotlink protection whitelist on your

bucket to block any access from domain names not in the list. For more information, see [Setting Hotlink Protection](#).

## Can I use case-insensitive download URLs?

No. COS filenames are case-sensitive, and thus so are the download URLs. If you have enabled CDN acceleration for your bucket, you can go to the CDN console to configure [Cache Ignore URL Case](#), which will increase the hit rate to some extent.

## What should I do if the error "your policy or acl has reached the limit (Status Code: 400; Error Code: PolicyFull)" occurs uploading files or creating a bucket?

COS allows each root account to have up to 1,000 bucket ACLs. This error occurs if you configure more bucket ACLs than this figure. Therefore, we recommend deleting unnecessary bucket ACLs.

### Note:

We do not recommend using object-level ACL or Policy. When calling APIs or SDKs, if you don't need special ACL control for the file, please leave the ACL-related parameters (such as x-cos-acl, ACL, etc.) empty to inherit the bucket permissions.

## Why Is Downloading Apk/Ipa Files Via Default Domain Not Supported

To ensure the security and stability of the overall service, starting from January 1, 2024, newly created buckets do not support downloading apk/ipa files using the bucket's default domain (including bucket domain name, static website domain, and global acceleration domain name). For details, see the [COS Bucket Domain Usage Security Management Notification \(implemented in January 2024\)](#) document.

## Why Preview Files with Default Domain Is Not Supported

To ensure the security and stability of the overall service, starting from January 1, 2024, newly created buckets do not support previewing files in the browser using the bucket's default domain (including storage bucket domain name, static website domain, and global acceleration domain). For reference, please see the [COS Bucket Domain Usage Security Management Notification \(Effective January 2024\)](#) document.

## Previewing Txt Format File Online with Garbled Characters Issue, What Should Be Done

Follow the steps below for troubleshooting:

1. Ensure the encoding (such as UTF-8, GBK) used in the txt format file matches the original file. If inconsistent, please see the [Custom Headers](#) document and set the Content-Type accordingly. For example, if the txt format file uses UTF-8 encoding, set the Content-Type to `text/plain;charset=UTF-8`.
2. The browser may have compatibility issues. Try using a different browser to preview files.
3. Check whether there is damage in the file content or reupload it in another file format.

# Data Management

Last updated: 2023-09-19 08:48:31

## FAQs About Deletion

### **What should I do if buckets fail to be deleted via the console with a message "The directory is not empty" or "Please delete the valid data in the bucket"?**

1. Please confirm whether you are using the V4 or V5 version of the console. If you are using the V4 version, please [contact us](#) to request an upgrade to the V5 version of the console.
2. Log in to the [Object Storage V5 console](#), navigate to the bucket you want to delete, and click on the **Unfinished Uploads** management item to delete the file fragments.
3. Return to the **Bucket List** and delete the corresponding bucket.

### **If a file within a bucket is accidentally deleted, can it be recovered?**

Currently, files deleted by mistake cannot be restored. You can enable bucket versioning to store multiple versions of an object with the same name. This allows you to retrieve, delete, or restore specific object versions, which can help recover data lost due to user errors or application failures. For more information, please refer to [Setting Up Version Control](#).

## File Fragments

### **How are file fragments generated, and can they be downloaded?**

File fragments are generated when an object upload is paused or canceled during the process. Tencent Cloud Object Storage (COS) supports uploading large files larger than 5GB using multipart uploads, which involves dividing the large file into smaller chunks for uploading. If the Abort Multipart Upload or Complete Multipart Upload API is not called during the multipart upload task, the uploaded chunks will be stored as file fragments. File fragments cannot be downloaded.

### **Do file fragments occupy storage space, and will they incur charges?**

Like objects, incomplete multipart uploads consume your storage capacity and incur storage capacity costs.

### **How do I regularly clean up file fragments?**

You can directly delete file fragments on the Object Storage console. For instructions, please refer to [Deleting Fragmented Files](#). You can also [configure a lifecycle policy to periodically](#)

[clean up file fragments](#).

## **Will cleaning up file fragments affect other completely uploaded files?**

Cleaning up file fragments will delete files that have not been successfully uploaded, without affecting other files that have been completely uploaded.

## **Custom Headers**

### **Can object headers be customized in batches?**

COS supports batch custom headers. For more information, see [Custom Headers](#).

## **Additional Features**

### **Does COS support setting callbacks? For example, creating a thumbnail for each image uploaded and save it to another bucket?**

You can configure COS in conjunction with SCF. For relevant practice documentation, please refer to [Retrieve Images from COS and Create Thumbnails](#).

### **Does COS allow me to view the size of a folder?**

The COS console supports viewing the number of objects and the storage capacity occupied by the current folder. For more information, please refer to [View Folder Details](#).

### **Can objects in COS be reverted to a previous version?**

After enabling the [Version Control](#) feature for a bucket, you can store multiple versions of objects in the bucket and retrieve, delete, or restore specific object versions. For detailed steps, please refer to the [Setting Version Control](#) documentation.

### **How can I view the number of a specific file type (e.g., the number of images) in COS?**

You can enable the inventory feature and view the generated inventory file. For more information, see the [Enabling Inventory Feature](#) documentation.

# Logging and Monitoring

Last updated: 2023-09-19 08:49:07

## Logging

### Does COS provide file upload, download, and deletion logs?

COS provides the [logging](#) feature, which records the access details of a source bucket. These logs are then stored in a destination bucket for better bucket management. To get the file upload, download, and deletion logs, enable access logging to record file operations.

### How do I query which files incur the most public network traffic in COS?

You can use the [logging](#) feature in COS to obtain detailed access information for your bucket. After obtaining the log files, you can download them locally and write a program to analyze which files consume the most public network traffic. Alternatively, you can use the [Data Lake Compute Service](#) to load the log files and perform the analysis.

### How do I query from which source IPs most public network traffic in COS comes from?

Currently, you can use the [logging](#) feature in COS to obtain detailed access information for your bucket. After obtaining the log files, you can download them locally and write a program to analyze the main source IPs of public network traffic. Alternatively, you can use the [Data Lake Compute Service](#) to load the log files and perform the analysis.

### Can I set thresholds for public network downstream traffic and request count in COS?

You can [set up an alarm policy](#) in the [Tencent Cloud Observability Platform](#). When the COS public network outbound traffic reaches the threshold, you will receive a notification alert. COS does not currently support automatically stopping the service when the public network outbound traffic reaches the threshold.

### How do I view file deletion logs?

To view file deletion records, you can query the logs delivered through the [logging](#) feature. After enabling access logging, you can use the [Data Lake Compute Service](#) to load the log files and filter deletion operation records. Generally, deletion operation records can be identified by searching for the `DELETE` operation in the `reqMethod` field.

```
1.0 examplebucket-125000000 ap-chengdu 2020-02-10T13:07:00Z
examplebucket-125000000.cos.ap-chengdu.myqcloud.com DELETEObject
110.110.110.110 AKIDSuCmiBvppcdxShtPrCjhEUPF***-J6AsmEPu8NYMOhgX3HLExh
- 0 0 / DELETE tencentcloud-cos-console 200 - - 746 146 USER -
100009682373 - 100009682373:100009682373
NWU0MTU1NzRfNWNiMjU4NjRfM2JkMV8yNGFiNGEw - - - - DELETE /filepath
HTTP/1.1
```

If you cannot find deletion logs among access logs, check whether rules of deletion upon expiration are set in the [lifecycle configuration](#).

## How do I query COS bucket configuration logs?

Bucket configuration operation logs are delivered to the CloudAudit service. Refer to the [Querying Operation Log Event Details](#) document to retrieve COS bucket configuration operation logs.

## Where can I query bucket creation and deletion logs?

The creation and deletion records of buckets are delivered to the CloudAudit service. Refer to the [Querying Operation Record Event Details](#) documentation, and select the `DeleteBucket` and `PutBucket` events to filter the corresponding operation records.

## Monitoring

### Can traffic be throttled in COS?

COS does not have built-in traffic restrictions. However, you can create an alarm policy using the Tencent Cloud Observability Platform [Create Alarm Policy](#). When traffic reaches a certain threshold, an alarm notification will be triggered and sent to your specified email address or mobile phone.

### Why does the request count or traffic on the monitoring dashboard increase suddenly?

If your business has an abnormal surge in the request count or traffic, your business may be hotlinked. You need to check whether public read is enabled for your bucket. We recommend you not enable public read, as it will bring uncontrollable risks to your business. You can grant access according to the [principle of least privilege](#).

If you must use public read, we recommend you use the following methods to guarantee the bucket security:

1. Enable the [logging](#) feature for your bucket to log bucket access requests.
2. Enable the [hotlink protection](#) feature to block access requests from abnormal IPs.
3. [Create a COS alarm policy](#) and set a threshold, so that alarm notifications will be sent to you by SMS or email once the traffic exceeds the threshold.

# Permission Management

Last updated: 2023-09-19 08:49:47

## Keys

### How can I view the key information such as `APPID` , `SecretId` , and `SecretKey` ?

The second half of a bucket name is the APPID. You can check it by logging in to the [COS Console](#) . To check the information such as `SecretId` and `SecretKey` , log in to the CAM Console and go to [API Key Management](#) .

### How long will a temporary key be valid?

Currently, a temporary key can be valid for up to 2 hours (i.e., 7,200 seconds) for the root account, and 36 hours (i.e., 129,600 seconds) for a sub-account. The default validity period is 30 minutes (i.e., 1,800 seconds). Requests carrying an expired temporary key will be denied. For more information, please see [Generating and Using Temporary Keys](#) .

### What do I do if my key information such as `SecretId` and `SecretKey` is compromised?

You can delete the compromised key and create a new one. For more information, please see [Access Key](#) .

### How can I generate a time-bound access URL for a Private Read/Write file?

You can set the effective time for your key by referring to [Generating and Using Temporary Keys](#) .

## Permissions

### How can I grant a sub-account permission to access a specific folder?

You can grant such permission by referring to [Setting Folder Permissions](#) . To grant more advanced permissions to a sub-account, see [Authorization Cases](#) .

### What do I do if COS returns a 403 error?

You can use the [Self-Diagnostic Tool](#) provided by the COS team for developers. The Self-Diagnostic Tool can help you diagnose operational anomalies through the RequestId of the request.

1. Check whether the configuration of `BucketName` , `APPID` , `Region` , `SecretId` , and `SecretKey` is correct.
2. If the above information is correct, check whether a sub-account is used. If so, check whether the sub-account has been authorized by the root account. If it has not been authorized, log in to the root account to authorize the sub-account.
3. Perform authorization. For more information, see [Cases of Permission Setting](#) .
4. If a temporary key is used for operation, check whether the current operation is in the Policy set when obtaining the temporary key. Otherwise, modify the relevant Policy settings.

## What do I do if “AccessDenied” is reported?

In most cases, this error is reported due to unauthorized access or insufficient permissions. You can troubleshoot as follows:

1. Check whether the configuration of `BucketName` , `APPID` , `Region` , `SecretId` , and `SecretKey` is correct. Note that you should also check whether spaces are carried.
2. If the configuration above is correct, check whether a sub-account is used for the operation. If yes, check whether the sub-account has been authorized by the root account. If it has not yet been authorized, log in using the root account to authorize the sub-account. For more information about authorization, please see [Cases of Permission Settings](#) .
3. If a temporary key is used, check whether the current operation is in the policy set when the temporary key is obtained; if not, modify the relevant policy settings. For more information, please see [Generating and Using Temporary Keys](#) .

The COS team provides developers with a [Self-help Diagnostic Tool](#) . This tool can help you diagnose operational exceptions using the RequestId of a request.

## What do I do if the number of bucket permissions has reached the upper limit?

Each root account (i.e., each `APPID` ) can have up to 1,000 bucket ACLs. If more bucket ACLs have been configured, an error will be reported. Therefore, you are advised to delete unnecessary ACLs.

### Note

We do not recommend using file-level ACL or Policy. When calling APIs or SDKs, if there is no need for specific ACL control on files, please leave the ACL-related parameters (such as `x-cos-acl`, `ACL`, etc.) empty to inherit the bucket permissions.

## What should I do if an error is reported during bucket creation?

Possible causes:

1. A bucket with the same name already exists. In this case, you need to name the bucket differently.
2. The public read/private write or public read/write permissions have been set for too many existing buckets, and the maximum number of ACL rules for the root account has been reached. When you create a bucket, an error will be reported because this maximum number cannot be adjusted.

The following two solutions are provided for your reference:

Option 1: You can change the access permissions of the existing bucket to private read/write. For more information, see [Setting Bucket Access Permissions](#). Then, try creating a new bucket.

Option 2: You can **Add Policy** in **Policy Permission Settings** and set the appropriate access permissions. For more information, see [Adding Bucket Policies](#).

## Can I access a public-read file using a signed URL whose signature has expired?

If you use an expired signed URL to access a public-read file, COS will first verify the permissions. If the URL has expired, the access will be denied.

## What do I do if "403 Forbidden" or "permission rejected" is reported during uploads, downloads, or other operations?

You can troubleshoot as follows:

1. Check whether the configuration of `BucketName`, `APPID`, `Region`, `SecretId`, and `SecretKey` is correct.
2. If the configuration above is correct, check whether a sub-account is used for the operation. If yes, check whether the sub-account has been authorized by the root account. If it has not yet been authorized, log in using the root account to authorize the sub-account. For more information about authorization, please see [Cases of Permission Settings](#).
3. If a temporary key is used, check whether the current operation is in the policy set when the temporary key is obtained; if not, modify the relevant policy settings. For more information, please see [Generating and Using Temporary Keys](#).

The COS team provides developers with a [Self-help Diagnostic Tool](#). This tool can help you diagnose operational exceptions using the RequestId of a request.

## How can I prevent users from downloading COS data?

You can prevent users from downloading data based on your use case as follows:

1. To prevent sub-accounts from downloading data, please see [Granting Sub-accounts Access to COS](#).
2. To prevent anonymous users from downloading data, you can set your bucket to private-read/write, or set `deny anyone Get Object` in the bucket policy.

## How can I grant permissions to a sub-account under another root account?

Assume that you (root account A) need to grant bucket permissions to the sub-account B0 that is under the root account B. You need to first grant the root account B permissions to operate your bucket. Then, root account B should grant the permissions to its sub-account B0. For detailed directions, see [Granting Bucket Permissions to a Sub-Account that is Under Another Root Account](#).

## How can I only allow sub-accounts/collaborators to upload but not delete files?

You can log in to the [CAM console](#) to create a custom policy that grants specified permissions to sub-accounts. For detailed directions, please see [Creating Custom Policies](#).

### Note

When creating a custom policy, grant read permissions and only select upload permissions for write operations. **Do not select any delete-related permissions.**

1 Edit Policy > 2 Associate User/User Group/Role

Visual Policy Generator JSON

▼ COS(0 actions)

Effect \*  Allow  Deny

Service \* COS (cos)

Action \* [Collapse](#)

**Select actions**

All actions (cos:\*) [Show More](#)

[Add Custom Action](#)

**Action Type**

Read (39 selected) [Show More](#)

Write [Fold](#)

**Select Action**

Filter Actions

<input type="checkbox"/> Action Name	Authorization Granular... ▼	Description
<input type="checkbox"/> AppendObject	Resource-level	append object
<input type="checkbox"/> CompleteMultipartUpload	Resource-level	Complete multipart upload t...
<input type="checkbox"/> CreateJob	Operation-level	Create a COS Batch job
<input type="checkbox"/> DeleteBucket	Resource-level	Delete bucket
<input type="checkbox"/> DeleteBucketCORS	Resource-level	Delete the cross-origin reso...
<input type="checkbox"/> DeleteBucketDomain	Resource-level	Delete bucket domain confi...

Support for holding shift key down for multiple selection

List [Show More](#)

## When I access a public-read bucket using its default domain name, how can I hide the returned file list?

You can set a permission to deny anyone's Get Bucket operation for the bucket by following the steps below:

Log in to the [Object Storage Console](#), select the bucket list, and enter the corresponding bucket's **Permission Management** page.

### Method 1:

1. Click **Permission Policy Settings**. Then, click **Add Policy** under **Visual Editor**.

2. Add the corresponding operation permissions as shown in the image below, and click **Confirm** to save.

### Add Policy ✕

✓ Template >
 2 **Configure Policy**

When dealing with authorizations, you should strictly conform to [principles of least privilege](#). You can authorize the user to perform restricted operations (such as only authorize read operations) and access only the resources with specified prefix, to avoid data security risks due to excessive permissions and operations that you don't mean to authorize.

Policy ID

Effect \*  Allow  Deny

User \* Everyone ▼  ✕

[Add User](#)

Resource \*  The whole bucket  Specified path

Operation \* GetBucket ✕

[Add Action](#)

Condition ⓘ IP ▼ equals to ▼  ⓘ ✕

[Add Rule](#)

Previous
Finish

## Method 2:

Locate the **Policy Permission Settings** and click **Policy Syntax > Edit**. Enter the following expression:

```
{
  "Statement": [
    {
      "Action": [
        "name/cos:GetBucket",
        "name/cos:GetBucketObjectVersions"
      ]
    }
  ]
}
```

```
],
  "Effect": "Deny",
  "Principal": {
    "qcs": [
      "qcs::cam::anyone:anyone"
    ]
  },
  "Resource": [
    "qcs::cos:ap-beijing:uid/1250000000:examplebucket-1250000000/*"
  ]
}
],
"version": "2.0"
}
```

### Note

Please replace the relevant information in `qcs::cos:ap-beijing:uid/1250000000:examplebucket-1250000000/*` as follows:

- “ap-beijing” : Replace it with the region where your bucket resides.
- “1250000000” : Replace it with your `APPID`.
- “examplebucket-1250000000” : Replace it with your bucket name.

The second half of the bucket name is the APPID. You can check it by logging in to the [COS Console](#).

## Are COS's ACLs bucket-specific or account-specific? Can I specify permissions when uploading files?

ACLs are account-specific. You are not advised to use file-level ACLs or policies. When calling APIs or SDKs, if you do not need ACL control over a file, we recommend leaving the ACL-related parameters (such as `x-cos-acl` and `ACL`) empty to inherit the bucket permissions.

## How do I authorize a collaborator to access a specified bucket?

A collaborator is a special sub-account. For more information, please see [Access Policy Language Overview](#).

## Can I isolate permissions by buckets or other dimensions if I have multiple services that need to work with buckets?

You can log in to the [CAM Console](#), go to the User Management page, create sub-accounts for different businesses, and grant them various authorization permissions.

## **How can I create sub-accounts for subsidiaries or employees and grant them permissions to access specific buckets?**

You can create sub-accounts and grant them permissions by referring to [Granting Sub-accounts Access to COS](#).

## **How can I allow specific sub-accounts to only operate a certain bucket?**

To grant a sub-account access to a specific bucket, you can add a bucket policy for the sub-account with the root account. For more information, see [Adding Bucket Policies](#).

## **Ranger Authentication and Verification**

For more information, see [FAQs](#).

## **Other**

### **What do I do if I cannot access COS resources normally?**

You can troubleshoot by referring to [Resource Access Error](#).

### **What do I do if “HTTP ERROR 403” is returned when I access COS using a CDN domain?**

This is usually because the CDN acceleration domain is disabled. You can troubleshoot by referring to [“HTTP ERROR 403” Is Returned When I Access COS Using a CDN Domain](#).

### **What do I do if I use a CDN domain name to access COS but only access the old version of the file?**

This is usually because of the existing cache. You can troubleshoot by referring to [A URL Points to a Wrong File](#).

### **Can the front-end access COS using CDN and a temporary key?**

If you need authentication when CDN pulls from COS with files set to private read/write, see [Setting CDN Acceleration](#).

# Data Security

Last updated: 2023-09-19 08:50:05

## Versioning

### Can I restore accidentally deleted data?

No. However, you can enable versioning for your bucket so that you can store multiple versions of an object in a bucket, and extract, delete, or restore a specific object version. Versioning allows you to restore data lost due to accidental deletion or application failures. For more information, please see [Setting Versioning](#).

### What is COS' s solution to disaster recovery?

You can achieve disaster recovery in COS by:

1. Enabling [versioning](#), which allows you to store multiple versions of an object in the bucket. For detailed directions, please see [Versioning Configuration](#).
2. Using [cross-bucket replication](#) to achieve remote disaster recovery. For more information, please see [Cross-Bucket Replication Configuration](#).
3. Using the [MAZ configuration](#), which provides IDC-level disaster recovery capabilities for your data.

#### Note

- Currently, the MAZ configuration of COS is supported only in Guangzhou, Shanghai, and Beijing regions and will be available in other public cloud regions in the future.
- Using the MAZ configuration incurs high storage usage fees. For more information, see [Pricing | Cloud Object Storage](#).

### How can I delete noncurrent object versions after I enable versioning for a bucket?

To delete historical version files, enable the [Lifecycle](#) option for [Managing Historical Version Objects](#), and transition or delete historical version objects.

**Add a Rule**
✕

✓ Basic Info >
2 Rule Configuration >
3 confirmation

If an object with a size smaller than the minimum storage size is transitioned to ARCHIVE or DEEP ARCHIVE, it will be calculated as the minimum size. For example, a file smaller than 64KB will be counted as 64 KB. For your lower costs, **The lifecycle does not perform the storage class conversion on objects smaller than 64 KB.**

To be notified of the completion of a lifecycle task, go to [SCF Console](#) Configuration to complete lifecycle configuration tasks (cos: TaskComplete: LifecycleCompleted) as a trigger notification function.

Managing the current version  Enable  Disable

Managing historical versions  Enable  Disable

Please select at least one rule

The file modified time  days after the objects are modified, they will be transitioned to STANDARD\_IA

The file modified time  days after the objects are modified, they will be transitioned to COLD

The file modified time  days after the objects are modified, they will be transitioned to ARCHIVE

The file modified time  days after the objects are modified, they will be transitioned to DEEP ARCHIVE

The file modified time  days later, they will be deleted

Remove Delete Markers from objects with no non-current versions. ⓘ  Enable  Disable

Deleting incomplete multipart uploads  After incomplete multipart uploads created  days later, they will be deleted

Previous
Next

## Can a newly uploaded object not overwrite the old one that has the same name?

No. By default, the old object with the same name will be overwritten by the new one. However, you can enable [versioning](#) for your bucket so that multiple object versions can be preserved. For more information, please see [Versioning Overview](#).

## How can I download a specific version of object?

If you use the API or SDK to download files, you can add the request parameter "versionId" to achieve this. For detailed API operations, please refer to the [GET Object](#) documentation. If you download via the console, set the historical versions to **Display** in the top navigation bar so that you can download the desired object version.

## How can I delete noncurrent object versions in batches?

You can use the COSBrowser tool to one-click delete noncurrent object versions in batches. For more information, please see [COSBrowser User Guide for Desktop Version](#). You can also [configure a lifecycle policy](#) to delete objects that were modified more than 1 day ago for noncurrent object versions.

## Cross-Region Replication

### Does cross-region replication use a private or public network?

By default, cross-region replication uses a private network.

#### Note

Note that cross-region replication incurs traffic fees, which cannot be redeemed with a resource pack yet. The fees incurred will be deducted from your account at 00:00 the next day.

### Can I sync resources between two regions?

Yes. Resources under the same account can be synced between two regions. You can [set cross-bucket replication](#) to replicate objects incrementally.

### How to quickly migrate resources from one account to another account?

You can use [COS Migration](#) to migrate data between buckets. Alternatively, you can [set cross-bucket replication](#).

### Does cross-bucket replication support replicating existing data?

No. You can use [Batch Operation](#) instead.

### If I enable cross-bucket replication and delete a file from the source bucket, will the file be deleted as well in the destination bucket?

In a source bucket with cross-bucket replication enabled, COS will replicate the following:

- Any new objects uploaded to the source bucket after the cross-bucket replication rule is added.
- Object attributes such as object metadata and version ID.

- Object operations, such as adding an object of the same name (equivalent to adding a new object) and deleting an object.

#### Note

- If you specify an object version to delete in the source bucket by specifying a version ID, COS will not replicate this delete operation.
- If you add a bucket-level configuration such as a lifecycle rule to the source bucket, COS will not replicate any resulting object operations.

For more information, see [Cross-Bucket Replication Actions](#).

## Data Encryption

### Does COS support data encryption?

Yes. COS supports encryption such as bucket encryption and object encryption. For more information, please see [Setting Bucket Encryption](#) and [Setting Object Encryption](#).

### Does COS encryption affect performance?

A client-side/COS-managed/KMS key is used to encrypt the file content into ciphertext, which affects performance to some extent (mainly by increasing access delay). The delay does not significantly affect large object reads/writes, but has a certain impact on small object reads/writes.

### How can I get an encrypted object?

To get an encrypted object, include an encryption header when reading it. The encryption header differs according to the encryption algorithm. For more information, please see [Common Request Headers](#).

## Content Security

### Why are non-compliant files found in my COS bucket?

Your data is stored in COS, and the data access permission is public read. When you access and disseminate such data on the public network, you need to comply with applicable laws and regulations. If the content of such data violates regulations, the compliance team of Tencent Cloud will handle it accordingly, and handled files will be displayed in the **Violation List** in the COS console.

### I have already enabled the content moderation feature, but why do I still receive violation notifications?

Possible reasons:

1. The content moderation feature is not configured correctly; for example:
  - Automatic freezing is not configured, or the identified non-compliant data is not processed in time (such as deleting files).
  - The configured data freezing score is too high, so some non-compliant files have low scores and are not frozen.
  - Some non-compliant images are historical data and have not been moderated. We recommend you conduct a full moderation of historical data to check the entire bucket.
2. If the moderation configuration is correct, but non-compliant data is determined to be normal, this is generally because the data is relatively obscure, and the existing moderation model doesn't correctly moderate it. We will regularly collect similar moderation error samples for continuous optimization. You can also [submit a ticket](#) for customized moderation services.

## Other

### **Are there backups for the STANDARD, STANDARD\_IA, and ARCHIVE storage classes?**

COS data is stored at the underlying layer using multiple replicas or erasure coding (both are imperceptible to users). The storage engines are distributed across multiple availability zones in a region, making the data reliability 99.999999999%.

# Pre-signed URL Issue

Last updated: 2025-12-22 15:23:49

## After successfully generating a presigned URL, how do you obtain the URL?

Print the URL in the language of the corresponding SDK to obtain it.

## Does It Support Generating Presigned URLs For Folders?

COS does not support generating presigned URLs for folders; signatures can only be generated for specified objects and concatenated for access. This is because COS operates solely on objects and does not have the concept of folders.

## How Do I Generate a Presigned URL When Using a Custom Domain Name?

- By specifying the corresponding custom domain name for the origin during SDK initialization, you can implement the feature of specifying a custom domain when generating a presigned URL, for example [JavaSDK](#).
- After initialization is completed, then implement [generating a presigned URL](#).

## Click to obtain the presigned URL link for download, but the download feature is not working. How to resolve this?

See [How to force files to download directly in the browser instead of being previewed?](#) in the Upload and Download section.

## Is It Necessary to Set the Corresponding content type When a Presigned Download URL That Overrides the Response Headers Is Generated?

Configuration is required.

# SDKs

Last updated: 2023-09-19 08:50:55

## Common SDK Issues

### What do I do if I upload a file using a file stream/handle, but the uploaded file is truncated or the size is 0?

If the file is uploaded with a file stream/handle, the stream or handle usually contains an offset pointer. If the stream/handle is used before being uploaded, the offset pointer may not point to the starting point of the file. In this case, the SDK uploads the file starting from where the offset points to by default, resulting in the truncated or 0-size file. To solve this problem, you are advised to check the offset, or point the offset to the file's starting point manually if necessary.

### How do I get the object's URL after it is successfully uploaded?

The object access address (file URL) in COS uses a fixed format. For more information, please refer to [Object Overview > Object Access Address](#).

### What do I do if the system reports that the temporary key expired when I upload files?

Please follow the steps below for troubleshooting:

1. Check whether the time of the machine that runs your applications is correct. If the machine time is incorrect, rectify it.
2. Check whether the expiration time ( `expirationDate` ) that you set is earlier than the current time. The current time being later than the expiration time will cause the signature to expire. In that case, you need to change the expiration time and regenerate a temporary key.
3. The iOS SDK initializes using the `QCloudSignatureProvider` and `QCloudCredentialFenceQueueDelegate` protocols. The `QCloudCredentialFenceQueue` scaffold caches and reuses temporary keys. You can update the cache by reinitializing the `credentialFenceQueue` instance to avoid using expired temporary keys. For detailed guidance, please refer to [Creating a COS Service Instance with the iOS SDK](#).

### How do I determine whether files are successfully uploaded?

In COS, each object has a corresponding **Etag** value. After a successful file upload, a string-type Etag value is returned. If the returned Etag is not NULL, you can add a conditional statement to confirm whether the file has been uploaded successfully.

## How do I request an object for which hotlink protection is configured?

Add a Header with a specified referer to your request for an object.

## Does generating a pre-signed URL generate network requests and incur fees? Will there be a delay?

Generating a pre-signed URL is local logic and does not generate network requests, causing no additional network latency and no additional cost. You can call the SDK API to generate a pre-signed URL at any time when needed.

## How do I configure a custom domain name for a COS pre-signed URL?

A pre-signed URL contains a fixed default domain name, which can be replaced via encoding.

## How do I create a directory in COS SDK?

In COS, directories are virtual and are represented by objects ending with a /. To create a directory, call the object upload interface and create an object key ending with a /. For more information, please refer to [Mini Program SDK Directory Creation Example](#).

## Why are different results returned when I use the same prefix rule and data structure to obtain `ObjectList` via COS SDK?

To accommodate user habits, COS simulates the display of "folders" or "directories" in graphical tools such as the **console** and **COSbrowser**. This is achieved by creating an object with a key value of "project/" and an empty content, which mimics the appearance of a traditional folder. As a result, the `ObjectList` obtained through the SDK will include empty objects with object names ending in `/`.

## SDK FAQs

- [Android SDK FAQs](#)
- [C SDK FAQs](#)
- [.NET \(C#\) SDK FAQs](#)
- [Go SDK FAQs](#)
- [iOS SDK FAQs](#)
- [Java SDK FAQs](#)
- [JavaScript SDK FAQs](#)
- [PHP SDK FAQs](#)
- [Python SDK FAQs](#)
- [Mini Program SDK FAQs](#)

# Tools

## COS Migration

Last updated: 2023-09-19 08:51:35

### **What should I do if the migration tool exits abnormally?**

The tool supports checkpoint restart during uploads. For large files, if the process is interrupted or there is a service failure, you can rerun the tool to resume uploading the incomplete files.

### **If the files that have been migrated successfully to COS are deleted through the console or other methods, will the migration tool upload them again?**

No. All the migrated files are recorded in db. The migration tool scans db directory before each migration and the files recorded in db will not be uploaded again. For more information, see [Migration Mechanism and Process](#).

### **What should I do if the migration fails with the message "403 Access Deny" displayed in the log?**

Please ensure that the key information, bucket information, and region information are correct and that you have the necessary permissions. If you are using a sub-account, the parent account should grant the appropriate permissions. For local migration and migration from other cloud storage, you need to have read and write permissions for the bucket. For bucket copy, you also need read permissions for the source bucket. Additionally, check the client's system time. If it deviates significantly from the actual time, the tool-generated signature time may differ too much from the server's system time, causing the server to consider the signature expired and return a failure.

### **What should I do if the migration to COS from another cloud storage fails with an error message "Read timed out"?**

This error occurs when the data download from other cloud storage times out due to insufficient bandwidth. For example, when you migrate overseas data from AWS to COS, "read time out" may occur due to network latency caused by insufficient bandwidth. To solve this problem, you can increase the network bandwidth and test download speed with `wget` before migration.

## What should I do if the migration fails with a message "503 Slow Down" shown in the log?

This error occurs when frequency control is triggered. A limit of 30,000 QPS is imposed on an account in COS. We recommend you decrease the concurrency for small files in configuration. Then run the tool again to resume the migration.

## What should I do if the migration fails with the message "404 NoSuchBucket" shown in the log?

Check whether your key, bucket, and region information is correct.

## What should I do if an exception occurs with the following message?

```
Exception in thread "main" java.lang.ExceptionInInitializerError
  at org.rocksdb.RocksDB.loadLibrary(RocksDB.java:64)
  at org.rocksdb.RocksDB.<clinit>(RocksDB.java:35)
  at org.rocksdb.Options.<clinit>(Options.java:25)
  at com.qcloud.cos_migrate_tool.record.RecordDb.init(RecordDb.java:43)
  at com.qcloud.cos_migrate_tool.task.TaskExecutor.initRecord(TaskExecutor.java:94)
  at com.qcloud.cos_migrate_tool.task.TaskExecutor.run(TaskExecutor.java:146)
  at com.qcloud.cos_migrate_tool.app.App.main(App.java:60)
Caused by: java.lang.UnsupportedOperationException: Cannot determine JNI library name for ARCH='x86' OS='windows 10' name='rocksdb'
  at org.rocksdb.util.Environment.getJniLibraryName(Environment.java:78)
  at org.rocksdb.NativeLibraryLoader.<clinit>(NativeLibraryLoader.java:19)
  ... 7 more
```

This issue occurs because the tool uses rocksdb, which requires a 64-bit JDK. Please ensure that you are using an x64 JDK version.

## How to resolve the issue of not finding the rocksdb JNI library in a Windows environment?

In a Windows environment, the tool needs to be compiled in Microsoft Visual Studio 2015. In case of the above error message, you need to install [Visual C++ Redistributable for Visual Studio 2015](#).

## How do I modify the log level?

Modify the file `src/main/resources/log4j.properties` by replacing the value of `log4j.rootLogger` with the log level, such as `DEBUG`, `INFO`, and `ERROR`.

## What do I do if the `/tmp/librocksdbjnixxx.so: ELF file OS ABI invalid` error is reported in the Linux environment?

IFUNC needs to be supported on Linux and the binutils version in the running environment should be later than 2.20.

## What should I do if a task fails to be fully executed and "java.nio.file.FileSystemLoopException" is reported in `error.log` ?

The exception information in `error.log` is similar to:

```
2022-XX-XX XX:XX:XX [ERROR] [main:xxx]
[com.qcloud.cos_migrate_tool.task.MigrateLocalTaskExecutor:]
[MigrateLocalTaskExecutor.java:183]
walk file tree error
java.nio.file.FileSystemLoopException: /dataseal/xx1/file1
at java.nio.file.FileTreeWalker.visit (FileTreeWalker.java:294)
at java.nio.file.FileTreeWalker.next (FileTreeWalker.java:372)
at java.nio.file.Files.walkFileTree (Files.java:2706)
at
com.qcloud.cos_migrate_tool.task.MigrateLocalTaskExecutor.buildTask (Migr
ateLocalTaskExecutor.java:176)
at
com.qcloud.cos_migrate_tool.task.TaskExecutor.run (TaskExecutor.java:244)
at com.qcloud.cos_migrate_tool.app.App.main (App.java:135)
```

The reason is that the file `"/dataseal/xx1/file1"` to be migrated may be a soft link pointing to a resource in its parent directory. You can check with the following command:

```
[root@TENCENT64 /dataseal/cos_migrate_tool_v5-master/log]# ll
/dataseal/xx1/file1
lrwxrwxrwx 1 xx xx xx xx  x xxxx /dataseal/xx1/file1 -> ../xx1/
```

As shown above, the soft link file `"/dataseal/xx1/file1"` points to its parent directory `"/dataseal/xx1/"`, which will cause an infinite loop during traversal, and the migration task will be automatically terminated. It is recommended to delete such files in advance (Note: Excluding these files in the "excludes" configuration option is ineffective). If other problems occur, try to run the migration tool again. If the problem persists, please compress the configuration (with the key hidden) as well as the log directory and [contact us](#).

# COSCMD

Last updated: 2023-09-19 08:51:48

## What should I do when COSCMD is unavailable?

Please check whether the following requirements are met:

1. The OS is Windows, Linux, or macOS.
2. Local characters use UTF-8 encoding. Otherwise, exceptions will occur when you operate on Chinese files.
3. The local time is in sync with UTC. If there is a large deviation between the two, COSCMD might not function properly.

For more information, please see [COSCMD](#).

## Does the COSCMD tool support regular expressions?

This is not supported.

## I can successfully create a bucket with a name containing uppercase letters using COSCMD tool, but when I perform other operations with a bucket name containing uppercase letters, an error occurs. What is the reason for this?

COSCMD automatically converts uppercase letters to lowercase ones. A bucket name can only contain lowercase letters, numbers, and hyphens (-), with a length not greater than 50 characters. For more information, see [Specifications and Limits](#).

## Can the files in a sub-directory be excluded when I upload or download the files in the root directory with COSCMD?

Yes, you need to use the `--ignore /folder/*` parameter.

For example, to exclude the folder directory when downloading, use the `coscmd download --ignore /folder/*` command to filter. When ignoring a specific file extension, you must add a `,` or `"` at the end.

## Does COSCMD support using an asterisk (\*) to specify the download of objects with a specific prefix?

No. You need to use the following command format for download:

```
coscmd download prefix/ localpath/ -r
```

## Can I use the `list` command to list files by file upload time in COSCMD?

No. You can list files by specifying a prefix. For more information, please see [COSCMD](#).

## Can I use COSCMD to manage buckets of different accounts at the same time?

You can configure only the bucket under one account in the `cos.conf` configuration file. If you need to manage a bucket under another account, switch to the bucket first by using the following command:

```
coscmd config -a SecretID -s SecretKey -b BucketName-APPID -r region
```

You can obtain the SecretID and SecretKey from the [Access Management Console](#).

BucketName-APPID is the name of the storage bucket, and region refers to the location of the storage bucket.

## Can I specify multiple buckets in the COSCMD configuration file?

You can configure only one bucket in the COSCMD configuration file. If you need to manage another bucket, specify the bucket name and region COSCMD command for bucket switching.

- Specify the bucket name using the `-b <BucketName-APPID>` parameter, adhering to the BucketName-APPID naming format.
- Specify the region using `-r <region>` to set the bucket's location.

## Does COSCMD verify filename duplication for uploaded files?

No. If you upload a file whose name is duplicated with that of an existing file, COSCMD will overwrite the existing file.

## How can I improve the transfer speed when using COSCMD to transfer a large number of files?

1. You can adjust the maximum number of threads for multi-threaded operations by modifying the `MAX_THREAD` parameter, which is set to 5 by default. The number of threads depends on the machine's performance. Generally, setting it to 30 will fully utilize the bandwidth. For example, to adjust the concurrent threads to 30, execute the following command:

```
coscmd config -m 30
```

2. You can increase the size of individual blocks for multipart operations, in MB. The default size is 1 MB, and the range is 1–1,000 MB.

## Does COSCMD verify the content of uploaded files?

No. COSCMD adopts the overwrite upload mode by default. If you need to skip existing identical files, add the `-rs` parameter.

## How do I skip existing identical files when uploading files with COSCMD?

When uploading with COSCMD, you can add the `-rs` parameter to skip files with the same MD5 hash. For more information, see the [COSCMD Tool](#) documentation, specifically the [Upload Folder](#) example.

## How do I skip identical files when download files with COSCMD?

Use the `-s` or `--sync` parameter to skip downloading files that already exist locally with the same content (provided that the files were uploaded using the COSCMD upload interface and have the `x-cos-meta-md5` header). The complete command example is: `coscmd download -rs --skipmd5 cos_path local_path`.

## Can I upload multiple folders at the same time with COSCMD?

No. You can upload only one folder at a time. You can put multiple folders that need to be uploaded into a single folder for uploading, but it takes time to copy files locally.

# COSFS

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## Function Consultation

### How do I mount a bucket with a temporary key?

You can mount a bucket using a temporary key (STS) by following the steps below:

Step 1: Create a temporary key configuration file, such as `/tmp/passwd-sts`, to be used with the COSFS command option `-opasswd-file=[path]` to specify the key configuration file. For more information on temporary key concepts, refer to the [Temporary Key Generation and Usage Guide](#) document. An example of a temporary key configuration file is as follows:

```
COSAccessKeyId=AKIDXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX # Below are the Id,
Key, and Token fields of the temporary key
COSSecretKey=GYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYY
COSAccessToken=109dbb14ca0c30ef4b7e2fc9612f26788cadbfac3
COSAccessTokenExpire=2017-08-29T20:30:00 # Expiration time of the
temporary token in GMT time, which should be in the same format as shown
here
```

COSFS will determine whether it needs to reload the configuration from the key file based on the time configured in `COSAccessTokenExpire`.

#### Note

To prevent key leakage, you should set the permission of the key file to 600 in COSFS by running the following command:

```
chmod 600 /tmp/passwd-sts
```

Step 2: Run the COSFS command. Specify the role as sts using the command option `-ocam_role=[role]`, and specify the key file's path using `-opasswd_file=[path]`, as shown below:

```
cosfs examplebucket-1250000000 /mnt/cosfs -ourl=http://cos.ap-
guangzhou.myqcloud.com -odbglevel=info -oallow_other -ocam_role=sts -
```

```
opasswd_file=/tmp/passwd-sts
```

## How do I check the mounting parameter options and version number provided by COSFS?

You can check the parameter options provided by COSFS using the `cosfs --help` command, and check the COSFS version number using `cosfs --version`.

## How do I view the logs generated by COSFS?

In CentOS, COSFS-generated logs are stored in `/var/log/messages`; in Ubuntu, these logs are stored in `/var/log/syslog`. If you have any problems during operation, send us the log for the corresponding time period.

## How do I mount a directory in a bucket?

When running the mounting command, you can specify a directory under in bucket as shown below:

```
cosfs examplebucket-1250000000:/my-dir /mnt/cosfs -ourl=http://cos.ap-  
guangzhou.myqcloud.com -odbglevel=info
```

### Note

`my-dir` must start with `/`.

In versions below v1.0.5, the mounting command is:

```
cosfs 1250000000:examplebucket:/my-dir /mnt/cosfs -ourl=http://cos.ap-  
guangzhou.myqcloud.com -odbglevel=info
```

## How does a non-root user mount COSFS?

If you are not a root user, you are recommended to create a `.passwd-cosfs` file in the `Home` directory, set the permission to 600, and then mount COSFS using the mounting command. In addition, you can also specify the key file path using the `-opasswd_file=path` option and set the permission to 600.

## Does COSFS support mounting over HTTPS?

Yes. Mounting methods over HTTP and HTTPS are as shown below:

```
-ourl=http://cos.ap-guangzhou.myqcloud.com
-ourl=https://cos.ap-guangzhou.myqcloud.com
```

If the version of the NSS library that libcurl depends on is v3.12.3 or higher (check the NSS version using `curl -V`), you can mount the bucket over HTTPS by running the following command:

```
echo "export NSS_STRICT_NOFORK=DISABLED" >> ~/.bashrc
source ~/.bashrc
```

## How do I set auto-mounting at startup for COSFS?

You need to install the FUSE package first:

```
CentOS
#sudo yum install -y fuse

Ubuntu
#sudo apt-get install fuse
```

Add the following to the `/etc/fstab` file. The `_netdev` option specifies that the command can be executed only after the network is ready:

```
cosfs#examplebucket-1250000000 /mnt/cosfs fuse
_netdev,allow_other,url=http://cos.ap-
guangzhou.myqcloud.com,dbglevel=info
```

## How do I set the user and user group of files or directories under a mount point?

In certain scenarios (such as NGINX server), you need to set the user and user group of files or directories under a mount point, such as user `www` (uid = 1002, gid =1002). In this case, you need to add the following mount parameters:

```
-ouid=1002 -ogid=1002
```

## How do I mount multiple buckets?



## FAQs About Troubleshooting

### What should I do if the error message "unable to access MOUNTPOINT /path/to/mountpoint: Transport endpoint is not connected" is displayed and COSFS becomes inaccessible?

You can check whether the COSFS process exists using the `ps ax|grep cosfs` command. If the COSFS process is down due to faulty operations, run the following command to remount it:

```
umount -l /path/to/mnt_dir
cosfs examplebucket-1250000000:/my-dir /mnt/cosfs -ourl=http://cos.ap-
guangzhou.myqcloud.com -odbglevel=info
```

If the COSFS process error is not caused by faulty operations, you can check whether the fuse version of the server is below v2.9.4. The libfuse on versions below v2.9.4 can cause exceptional exit of the COSFS process. In this case, it is recommended to update the fuse version or install the latest version of COSFS as described in [COSFS](#).

### What should I do if the Content-Type of a file uploaded via COSFS is changed to "application/octet-stream"?

COSFS automatically sets the Content-Type of a file uploaded to COS by comparing the file's suffix against `/etc/mime.types`. When a Content-Type problem occurs, check whether the configuration file exists on the system. For Ubuntu, you can add it using `sudo apt-get install mime-support`. For CentOS, you can add it using `sudo yum install mailcap`. You can also create this file manually, where one line is added for each file format, as shown below:

```
image/jpeg                jpg jpeg
image/jpm                  jpm jpgm
image/jpx                   jpx jpf
```

### What should I do if "Bucket not exist" is displayed during mounting?

Check the parameter `-ourl` to ensure that the bucket part is not included in the URL. The correct format is:

```
-ourl=http://cos.ap-guangzhou.myqcloud.com
```

### Why can't I write to files that I could write to previously?

Because of the adjustment to the COS authentication policy, using the COSFS tool below v1.0.0 will cause the policy check to fail. You can install the latest COSFS tool and mount it again.

## What should I do if an error such as "Input/Output ERROR" occurs when using the COSFS tool?

Please follow the steps below to identify the cause of the error:

1. Check whether the server can access the COS domain name normally.
2. Check whether the account is configured correctly.
3. If you used the `cp` command containing the `-p` or `-a` parameter for copying, it is recommended that you remove the parameter and run the command again.

After confirming that the above configurations are correct, open the `/var/log/messages` log file on the server and locate the log entry for `s3fs`, which can help you identify the cause of error. If the error persists, [contact us](#).

## I've set auto-mounting at startup for COSFS using `/etc/fstab`, but the error "wrong fs type, bad option, bad superblock on cosfs" occurs when I run "mount -a". Why?

This error happens generally because the fuse library is missing on your server. It is recommended to install the fuse library by running the following command:

- CentOS

```
sudo yum install fuse
```

- Ubuntu

```
sudo apt-get install fuse
```

## Is it normal to see a lot of 404 error codes in the system log `/var/log/messages`?

In the internal logic of COSFS, a HEAD request is used to determine whether the parent directory and the file exist, and the 404 error does not necessarily mean that the program is running erroneously.

## Why does the file that I see in COS have a size of 0?

Under normal circumstances, when writing data to COSFS, a zero-sized file is first created on COS, and the data is written to a local cache file. During the writing process, the result of the

'ls' command for the mount point will display the change in file size. When the file is closed, COSFS will upload the data written to the local cache file to COS. If the upload fails, you may only see a zero-sized file, in which case you can try copying the failed file again.

## **Are the files in the COSFS cache directory the same as those in COS? Can I use them directly?**

No. The files in the cache directory are used to accelerate reads and writes in COSFS and may include only a part of the files in COS.

## **I have copied a file to COSFS using the rsync command and the progress has reached 100%, but I only see a temporary file on the server. Why?**

The rsync command creates a temporary file in the mounted directory. A progress display of 100% only indicates that the temporary file has been written locally at 100%. After the temporary file is completely written, it will be uploaded to COS and undergo a renaming and copying operation. Typically, copying data to a COSFS mounted directory using the rsync command takes more time than using the cp command.

## **What should I do if COSFS uses up the disk capacity?**

Uploads and downloads using COSFS involve disk file caching. When you upload or download a large file, if you don't specify the `-oensure_diskfree=[size]` parameter, the disk where the file is cached will be used up. You can use the `-oensure_diskfree` parameter to specify that when the remaining capacity of the disk is less than [size] MB, COSFS will minimize disk capacity usage (in MB). If you specify the `-ouse_cache=[path]` parameter, the cache file will be located in the path directory; otherwise, it will be in the /tmp directory.

For example, you can configure COSFS to reduce disk capacity usage when the remaining capacity is less than 10 GB by running the following command:

```
cosfs examplebucket-1250000000 /mnt/cosfs -ourl=http://cos.ap-  
guangzhou.myqcloud.com -odbglevel=info -oensure_diskfree=10240
```

## **What should I do if the error message "fuse: failed to open /dev/fuse: Operation not permitted" is displayed when I use docker to mount COSFS?**

To start a docker image, you need to add the parameter `--privileged`.

## **Can I use a directory as a shared cache directory for multiple mount points?**

It is not recommended that multiple mount points share a cache directory. The cache directory contains metadata used by COSFS, and sharing it may mess up the metadata.

## What should I do if the error message `"/bin/mount: unrecognized option --no-canonicalize"` is displayed when I use COSFS for mounting?

Lower versions of the mounting tool do not support the `--no-canonicalize` option. Please update the tool. You are recommended to [download v2.17](#) and then mount it again. The installation command is as follows:

```
tar -jxvf util-linux-ng-2.17.tar.bz2
cd util-linux-ng-2.17
./configure --prefix=/usr/local/util-linux-ng
make && make install
mv /bin/mount{,.off}
ln -s /usr/local/util-linux-ng/bin/mount /bin
```

## What should I do if mounting fails?

Step 1. Check whether the mounting command and the key configuration file are correct and whether the COS service is accessible based on the log files and error messages.

Step 2. Check whether the server time is correct by running the date command. If it is incorrect, correct it using the date command and then mount it again, such as `date -s '2014-12-25 12:34:56'`.

## Is it normal that the time of a mounted directory changes to 1970-01-01 08:00 when I use the `ls -l --time-style=long-iso` command?

Yes. After you unmount the mount point, the time of the mounted directory will return back to the time before mounting.

## Can a mounted directory be non-empty?

You can mount a non-empty directory using the `-ononempty` parameter, but you are not recommended to do so because a problem may occur when the mount point and the original directory have files with the same path.

## Why does it take the `ls` command so long to return when I run it in a COSFS directory?

If there are a lot of files in a mounted directory, executing the `ls` command requires a HEAD operation on each file in the directory, so it takes a lot of time to read the directory system before the command returns.

**Note**

We advise against enabling IO hung, as it may cause unnecessary restarts.

## What should I do if the system log files generated take up a lot of storage space when I set the log level to info?

You can periodically clean up the generated system log files or increase the log level, for example, by mounting with `-odbglevel=crit`.

## What scenarios does COSFS apply to, and how about the read and write performance?

As disks are required for COSFS' s read and write operations, COSFS is only suitable for scenarios where POSIX access syntax is required for COS access, such as machine learning algorithms of shared data sets reading shared data and simple log backups. COSFS adopts multithreaded upload and download for acceleration. Via a private network in the same region, it takes COSFS about 80s to sequentially read a 6 GB file and about 160s to sequentially write a 6 GB file. Generally, you can use SDK and multi-thread to achieve better performance.

**Note**

A large number of system calls generated by file reads and writes, along with numerous logs, can affect COSFS read and write performance to some extent. If you have higher performance requirements, you can specify a log level of `-odbglevel=warn` or higher.

## What should I do if the system prompts that COSFS is not found after the COSFS RPM package is installed?

If the cosfs installation path is `/usr/local/bin` and you receive a "cosfs not found" error, it may be because the path is not in the PATH environment variable. You need to add a line of configuration in `~/.bashrc` :

```
export PATH=/usr/local/bin:$PATH
```

Then you need to run the following command:

```
source ~/.bashrc
```

## When installing the COSFS RPM package, if you encounter a message stating "conflicts with file from package fuse-libs-\*, " what should you do?

Add the `--force` option when installing the COSFS RPM package:

```
rpm -ivh cosfs-1.0.19-centos7.0.x86_64.rpm --force
```

## Why does the system indicate no permission when I separately mount a directory that has been granted read-only permission in COSFS?

COSFS requires the GetBucket permission on the root directory. Therefore, you need to add the GetBucket permission on the root directory and the read permission on the corresponding directory. In that way, you can list other directories but have no operation permission on them.

## What should I do if COSFS has a high CPU utilization, sends a large number of HEAD and LIST requests to COS, and incurs a large amount of request fees during a certain period of time every day?

This is usually caused by scheduled disk scanning tasks on your server. A common disk scanning program on Linux is updatedb. You can add the COSFS-mounted directory to the `PRUNE_PATHS` configuration item in updatedb's configuration file `/etc/updatedb.conf` to prevent disk scanning. In addition, you can use the Linux tool auditd to find programs that access the COSFS mount point.

Follow the steps below:

Step 1: Install auditd.

Ubuntu:

```
ap-get install auditd -y
```

CentOS:

```
yum install audit audit-libs
```

Step 2: Start the auditd service.

```
systemctl start auditd  
systemctl enable auditd
```

### Step 3: Monitor the mounted directory.

#### Note

`-w` specifies the COSFS-mounted directory, and `-k` indicates the key to be outputted to the audit logs.

```
auditctl -w /usr/local/service/mnt/ -k cosfs_mnt
```

Step 4: Based on the logs, determine the programs that access the COSFS mount point. The audit logs are in the `/var/log/audit` directory and can be queried by running the following command:

```
ausearch -i | grep 'cosfs_mnt'
```

### Step 5: Stop the auditd service

If you need to stop the auditd service, you can use the following command:

```
/sbin/service auditd stop
```

#### Note

If the program accessing the mount point is always running, the newly started auditd will not monitor the access behavior of the program. This is because only the first call in multiple calls from the program to the mounted directory will be recorded.

## Why are the values of `Size` and `Available` are 256 TB after I run `df` ?

COS buckets offer unlimited storage capacity. The 256 TB displayed is only used as the output of `df`.

## Why is the value of `Used` is 0 after I run `df` ?

COSFS does not occupy local storage. In order to be compatible with tools such as `df`, the values of `Size`, `Used`, and `Available` displayed in COSFS are not the actual values.

## Why are the values of `Inode`, `IUsed`, and `IFree` are 0 after I run `df -i` ?

COSFS is not a disk-based file system and thus does not have `inode`.

## What should I do if I encounter a "No provider of xxx found." error when installing dependency packages on SUSE 12 SP3?

Please refer to [Solutions for COSFS Installation Issues on SUSE Systems](#).

# FTP Server

Last updated: 2023-09-19 08:52:19

## How do I enable the FTP feature?

Object storage is a persistent storage that supports web-based requests and does not provide native FTP access. To use the FTP protocol, you must use a transfer method. We recommend using the [FTP Server tool provided by Tencent Cloud to set up your own service](#). Due to the outdated nature of the FTP protocol, it cannot verify data integrity, ensure transmission security, or interface with the CAM permission system. Therefore, we strongly advise against using the FTP protocol for access, and Tencent Cloud will not provide ongoing support for the FTP protocol and transfer software.

For data synchronization, we recommend using the [COS Migration tool](#) or the [COSCMD tool](#).

## What does the `masquerade_address` option in the configuration file do and when does it need to be configured?

The `masquerade_address` is the server address provided to the client in the configuration. When the FTP server is running on a host that is mapped to a public IP through NAT, the `masquerade_address` option needs to be configured as the public IP of the FTP Server accessible to the client, in order to inform the client to use this IP for data communication with the server.

For example, on the machine where the FTP Server is running, execute the `ifconfig` command and obtain the network card IP mapped to the public network as `10.xxx.xxx.xxx`, which is assumed to be mapped to the public IP `119.xxx.xxx.xxx`. If the FTP Server does not explicitly configure the `masquerade_address` as the public IP (`119.xxx.xxx.xxx`) for the client to access the server, the FTP Server may use the private network address (`10.xxx.xxx.xxx`) when responding to the client in Passive mode. In this case, the client can connect to the FTP Server, but the server may not be able to return data packets to the client properly. Therefore, under normal circumstances, it is recommended that users configure the `masquerade_address` as the IP address used by the client when connecting to the server.

## After the `masquerade_address` option is correctly configured, I can log in to the FTP server normally, but when I run the FTP command for fetching data such as "list" or "get", the error "The server returns a non-routable address" or "ftp: connect: No route to host" occurs. How do I deal with it?

The most possible reason for this is that the FTP server's `iptables` or firewall policy is configured to reject or drop all ICMP protocol packets. After receiving the data connection IP returned by the FTP server in the PASSIVE mode, the FTP client will send an ICMP packet first

to verify the connectivity of the IP. In this case, errors such as "The server returns a non-routable address" may occur.

The recommended solution is to configure the iptables policy as needed to only reject or drop the desired ICMP packet types. For example, if you only want to block external ping-type ICMP packets, you can modify the policy as follows: `iptables -A INPUT -p icmp --icmp-type 8 -s 0/0 -j [REJECT/DROP]`

Alternatively, you can allow access to the FTP server only for specific client IPs.

## Why is the uploaded part retained in COS when the upload of a large file is canceled halfway?

The FTP server for the latest version of COS provides a complete streaming upload feature. When you upload a large file, the cancellation or disconnection of the upload will trigger the completion of upload. In this case, COS considers that your data stream has been uploaded and combines the uploaded data into a complete file. If you want to resume the upload, you can upload the file with the same name to overwrite the original one, or delete the incomplete file manually and upload the file again.

## What will happen if the size of a uploaded file exceeds the limit?

If the size of the uploaded file exceeds the limit set in the configuration file, the system returns an IOError exception and marks the error message in the log.

If you encounter any other issues, please [contact us](#) and provide the complete `cos_v5.log` log for further investigation and problem resolution.

## Why does a limit on the size of file to be uploaded need to be set in the COS FTP server configuration?

The maximum number of multipart uploads for COS is limited to 10,000 parts, with each part size ranging from 1MB to 5GB. The maximum upload file size is set here to reasonably calculate the size of an upload part.

The FTP Server supports uploading single files up to 200 GB by default, but it is not recommended to set the file size too large. As the single file size increases, the chunk buffer during upload will also increase accordingly, which may consume the user's memory resources. Therefore, it is advised that users set a reasonable size limit for single files based on their actual needs.