Cloud Object Storage
Product Introduction

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Overview

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Cloud Object Storage (COS) is a powerful Tencent Cloud distributed storage service that features low costs and high scalability, reliability, and security. It enables you to store a massive number of files and view them on the cloud anytime.
COS offers a simple and fast integration through various methods such as console, API, SDK, and tools, enabling massive data storage and management. It supports uploading, downloading, and managing files in any format. Tencent Cloud provides an intuitive web management interface, and its nationwide CDN/EdgeOne nodes accelerate file downloads.
The following video provides a detailed introduction to Cloud Object Storage:
Watch video

Product Features

COS provides both enterprises and individual users with a suite of features, including data management, remote disaster recovery, data access acceleration, and data processing for diverse use cases. For more information, see Features.

Concepts

This section describes key concepts that help you better understand COS.

- Bucket: a container for objects stored in COS. Each bucket can store an unlimited number of objects.
- Object: The basic unit of COS storage. It can be data in any format, such as image, document, audio, and video.
- Region: A physical location where data centers are hosted in Tencent Cloud. COS data is stored in the buckets in these regions.
- Multiple Availability Zones (Multi-AZ): Tencent Cloud Object Storage offers a multi-AZ storage architecture. Customer data is distributed across multiple data centers within a city, ensuring stable and reliable storage services even in extreme situations such as natural disasters or power outages that cause a complete data center failure.
- Endpoint: a COS endpoint used to access and download an object stored in a bucket.
- Storage Classes: Storage classes represent the storage level and activity of objects in COS. COS offers various storage classes: Standard Storage (multi-AZ), Infrequent Access Storage (multi-AZ), Intelligent Tiering Storage (multi-AZ), Intelligent Tiering Storage,

Standard Storage, Infrequent Access Storage, Archive Storage, and Deep Archive Storage. Each storage class is suitable for different use cases and has distinct characteristics, such as object access frequency and latency. For a detailed introduction to different storage classes, see Storage Class Overview.

Getting Started with COS

Getting started

COS offers various tools and video tutorials to help you better understand and use its services. For more information, see Cloud Object Storage.

Directions

The table below describes different options available for you to get started with COS:

Method	Note
Console	The COS console is the easiest way to work with COS without writing code or programs. You can use COS services with the COS console directly.
COS Browser	This tool makes it easy for users to perform data upload/download, access link generation, and other operations in a visualized manner.
COSCMD Tool	This tool allows users to perform operations such as batch upload/download/deletion of objects by using simple command line instructions.
API Method	COS employs XML API, a lightweight and stateless interface that allows you to send requests and receive responses directly via HTTP/HTTPS, facilitating seamless interaction with Tencent Cloud Object Storage backend.
SDK Method	COS supports various mainstream SDK development methods, including Android, C, C++, .NET (C#), Go, iOS, Java, JavaScript, Node.js, PHP, Python, and Mini Program SDK.

How Is COS Billed?

COS is billed on a pay-as-you-go (postpaid) basis by default. In addition, usage of certain billable items can also be deducted from discounted resource packs (prepaid). For more information, see Billing Overview.

Features

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COS offers the following features:

Action

SDK	Note
Actions on buckets	Supports creating, querying, deleting, and emptying buckets. For more information, see the documentation under the Bucket Management section, such as Creating a Bucket.
Actions on objects	Various storage types: COS offers multiple storage types for objects based on access frequency and disaster recovery levels, including Standard Storage (Multi-AZ), Infrequent Access Storage (Multi-AZ), Intelligent Tiering Storage, Standard Storage, Infrequent Access Storage, Archive Storage, and Deep Archive Storage. For more information, see Storage Types. Object/Folder: Upload, query, download, copy, and delete operations. For more information, see the documentation under Object Management, such as Uploading Objects.

Data Management

SDK	Note
Lifecycle	COS supports setting lifecycle rules for objects, periodically performing automatic deletion or storage type conversion for specified objects. For more information, please refer to Lifecycle Overview.
FAQs About Static Website	Configure the bucket as a static website hosting mode and access the static website through the bucket domain. For more information, please refer to Hosting Static Websites.
Inventory	COS can scan specified objects or objects with the same prefix in the user's bucket according to the user's inventory task configuration, on a daily or weekly basis. It generates an inventory report and stores it as a CSV file in the designated bucket. For more information, please refer to Inventory Feature Overview.

Number of bucket tags	Bucket tags can be used as identifiers for managing buckets, making it easier for users to manage buckets in groups. Users can set, query, and delete tags for specified buckets. For more information, please refer to Bucket Tag Overview.
Event Notifications	COS integrates with SCF to provide real-time notifications when COS resources change (e.g., new file uploads, file deletions). For more information, see Event Notifications.
COS Select	COS Select allows you to filter objects stored in COS using Structured Query Language (SQL) statements, enabling you to retrieve objects and obtain the required data. By filtering object data with COS Select, you can reduce the amount of data transferred from COS, lowering the cost and latency associated with retrieving this data. For more information, please refer to Select Overview.
Log Management	The log management feature records detailed access information of a specified source bucket and saves this information as log files in a designated bucket, enabling better management of the bucket. For more information, please refer to Log Management Overview.
Number of object tags	Object tagging is implemented by adding a key-value pair identifier to objects, assisting users in managing objects within buckets. Object tags consist of a tag key (tagKey) and tag value (tagValue) connected by an equal sign (=), for example, group = IT. Users can set, query, and delete tags for specified objects. For more information, please refer to Object Tagging Overview.
CSG	Tencent Cloud Storage Gateway is a hybrid cloud storage service. You can configure a storage gateway for your COS bucket. Once configured, the bucket can be mounted as a network folder on any CVM server for use as a storage device. For more information, please refer to Setting up Storage Gateway.

Remote Disaster Recovery

SDK	Note
Versioning	Version control allows for storing multiple versions of the same object within a single bucket. After enabling version control for a bucket, users can retrieve, delete, or restore objects in the bucket based on their version ID. This helps recover data lost due to accidental deletion or application failure. For more information, see Version Control Overview.

Cross-bucket replication	Users can configure bucket replication rules to automatically and asynchronously replicate incremental objects between different buckets, achieving data disaster recovery and backup. For more information, please refer to Bucket Replication Overview.
Multi-AZ	COS introduces the multi-AZ storage architecture, providing data center-level disaster recovery capabilities for user data. For more information, see Multi-AZ Feature Overview.

Data Security

SDK	Note
Encryption	COS supports applying data encryption policies at the object level before writing data to disks within the data center, and automatically decrypts data when accessed. For more information, please refer to Server-side Encryption Overview and Bucket Encryption Overview.
Hotlink protection	COS supports hotlink protection configuration. Users can configure blacklists/whitelists for data resource security protection through the console's hotlink protection feature. For more information, please refer to Hotlink Protection Implementation.

Access Management

SDK	Note
Cross-origin Access	COS supports cross-origin access settings in accordance with the HTML5 standard, facilitating cross-origin access. For cross-origin access, COS responds to OPTIONS requests and returns specific rules set by developers to the browser. For detailed instructions, please refer to Setting up Cross-Origin Access.
Origin-pull	Set origin-pull rules for the bucket. When the requested object is not in the bucket or specific requests need to be redirected, users can access the corresponding data from COS through origin-pull rules. For detailed operations, please refer to Setting Origin-pull.
Bucket Policies	Users can add policies to buckets, allowing or denying access to COS resources for specific accounts or IP addresses (or IP ranges). For detailed instructions, please refer to Adding Bucket Policies.

Cloud access management	Users can manage access permissions for buckets and objects. When a request for a resource is received, COS checks the corresponding ACL to verify if the requester has the required access permissions. For more information, please refer to Access Control Basics and Granting Sub-account Access to COS.

Access Speed

SDK	Note
CDN Acceleration	COS, in conjunction with CDN/EdgeOne acceleration services, enables extensive downloading and distribution of content stored in buckets, making it particularly suitable for scenarios involving repeated downloads of the same content. For more information, see CDN Acceleration Overview.
Global Acceleration	COS's global acceleration feature helps users worldwide access your storage bucket quickly, increasing your business access success rate, further ensuring your business stability, and enhancing your user experience. For more information, please refer to Global Acceleration Overview.
Single-connection bandwidth limit	COS supports traffic control during file uploads and downloads to ensure the network bandwidth for your other applications. For more information, see Single-link Speed Limit.

Batch Job Processing

SDK	Note
Batch operations	Users can specify a list of objects within a bucket to perform designated actions. This is done by generating an inventory list as the specified object list through the inventory feature, or by recording the objects to be processed in a CSV-formatted file according to the inventory file format. COS batch processing will be carried out based on this object inventory file. For more information, please refer to Batch Processing Overview.

Data Monitoring and Alerts

SDK	Note
Dashboard	COS offers data storage monitoring capabilities, allowing you to view data volume and trends for different storage types over various time periods. For more information, please refer to Viewing Data Overview and Querying Data Monitoring.
Setting alarm policies	You can set threshold alarms for COS monitoring metrics using the alarm policies in the Tencent Cloud Observability Platform. Alarm policies consist of five essential components: name, policy type, alarm trigger conditions, alarm objects, and alarm notification templates. For more information, see Setting Monitoring Alarms.

Data Management

SDK	Note
CreatePicJobs	COS integrates Cloud Infinite (CI), a comprehensive media solution that covers image processing, auditing, and recognition. You can use COS's upload and processing interfaces for media data operations. For more information, see Image Processing Overview. Additionally, it supports advanced image compression and blind watermarking features. For details, see Advanced Image Compression Overview and Blind Watermarking Overview.
Media Processing	Media Processing is a multimedia file processing service based on COS and Cloud Infinite, covering video transcoding, frame extraction, audio and video splicing, video to animated GIF conversion, video metadata retrieval, and advanced intelligent cover processing services utilizing Tencent Cloud's AI technology. For more information, please refer to Media Processing Overview and Data Workflow Overview.
File Processing	File processing is a service provided by COS based on CI for handling files of all formats. It currently offers file hash calculation, file decompression, and multi-file zipping capabilities. For more information, please refer to File Processing Overview.
Previewing document	The document preview service is based on Tencent Cloud CI. Once enabled, document files in the storage bucket can be previewed online without downloading, addressing the issue of displaying document content on webpages. For more information, please refer to Document Preview Overview.

Smart audio	Smart Voice Service, based on Tencent Cloud CI, enables operations such as text-to-speech, speech recognition, and audio noise reduction. For more information, please refer to Smart Voice Overview.
Function Service	COS supports setting CDN cache refresh for specified buckets. For more information, please refer to Function Compute.

Data Moderation

SDK	Note
Content moderation	The content moderation service for object storage offers intelligent review of multimedia content, including images, videos, audio, text, documents, and webpages. It helps users effectively identify prohibited content such as pornography, violence, illegal activities, and offensive material, mitigating operational risks. For more information, please refer to Content Moderation Overview.

Integration Apps

SDK	Note
Integration with other Tencent Cloud services	COS leverages SCF to provide users with database backup, message backup, log backup, log analysis, and data export features. For more information, please refer to Application Integration.

Tool

SDK	Note
Management tools	COS offers a variety of practical tools such as COSBrowser, COSCMD, COSCLI, and COS Migration, which make it easy for users to manage data or migrate data. For more information, please refer to the Tools Overview.

API/SDK

SDK	Note
APIs and SDKs	• API: COS offers a comprehensive set of APIs, including usage methods and parameters for functional interfaces, request examples, response examples, and error code descriptions. For more information, see Operation List. • COS supports various development languages, including Android, C, C++, .NET (C#), Flutter, Go, iOS, Java, JavaScript, Node.js, PHP, Python, and Mini Program SDK. For more information, please refer to the SDK Overview.

Supported protocol

SDK	Note
Various protocols	COS supports various transport protocols, including HTTP/1.0, HTTP/1.1, and QUIC, as well as encryption protocols such as TLS 1.0, TLS 1.1, and TLS 1.2. To use the QUIC protocol, please contact us to enable the whitelist.

Use Cases

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This document introduces the use cases of COS.

Application Data Storage

Whether it's a mobile APP, website, or HTML5 webpage, COS provides language SDKs based on application type for seamless access. During business surges with sudden increases in user-generated content (UGC), COS automatically scales according to traffic needs, handling peak business pressures easily. Since UGC normally has time-dimensional access characteristics, COS enables hot and cold data tiering—hot data uses standard storage while cold data uses infrequent storage. In conjunction with lifecycle rule configuration, switching storage classes effectively reduces storage cost.

Data Processing

For user-submitted data in COS, COS can perform editing, processing, and review operations based on Cloud Infinite (CI): for image data, users can crop, scale, transcode, sharpen, or add watermarks; for video data, users can transcode, add watermarks, or extract frames; for document data, users can generate images or HTML for preview and add watermarks to preview images. It also supports content review for images, audio and video, and text, such as detecting pornography and illegal content.

Content Delivery

Website services usually separate frequently changing and long-term unchanged resources in dynamic web pages based on certain rules. Static resources refer to long-term unchanged unstructured data resources. Standard storage provides storage and distribution capability for static resources, reducing the pressure on resource servers. It leverages the characteristics of unlimited capacity and high-frequency read/write to offer expandable and reliable storage for static resources. Users can host all static content in websites (including files such as audio, video, and images) in standard storage and use Tencent Cloud CDN to distribute content. Combined with the ability of Tencent Cloud CDN global acceleration nodes, hot spot files can be delivered to edge nodes in advance to reduce access latency.

Big Data Analysis

Regardless of whether users store medical or financial data or multimedia files such as photos and audio-video, COS can be used as a data source for big data analysis. COS supports storing EB-level unstructured data with high availability, reliability, security, and scalability. In conjunction with Tencent Cloud Big Data Suite, it enables quick creation and deployment of

analytical applications. Once high-performance computing requirements are completed, data can be converted to archive storage to reduce service usage costs for long-term data retention.

Disaster Recovery and Backup

User data stored in COS can be replicated across multiple designated regions through the cross-region replication feature, ensuring against accidental data loss by locating and restoring complete data using redundant data. At the same time, because multiple data copies are stored in different regions, it avoids the loss caused by force majeure disasters in a single region, ultimately resulting in multi-redundancy backup and cross-regional disaster recovery effects. This ensures data durability and stability, adding multiple security mechanisms for important data.

Strengths

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Stability and Durability

COS stores data in a cross-infrastructure, multi-device, and redundant manner, provides remote disaster recovery and resource isolation capabilities for your data. It delivers an up to 99.9999999999% durability for each object, ensuring that your data is more durable than on other storage architectures.

High Security and Reliability

COS features hotlink protection that can block access requests from malicious sources. It supports SSL-based encrypted data transfer and allows you to control the read and write permissions of each individual file. With the aid of Tencent's attack defense system, it can effectively resist DDoS and CC attacks to ensure normal operations of your business.

Optimal Cost Performance

COS eliminates your need to purchase, deploy, and maintain traditional hardware devices, thereby reducing your Ops workload and hardware hosting costs. It supports on-demand and pay-as-you-go usage, so you do not need to pay for any reserved storage space in advance. Moreover, it can transition cold data through lifecycle management to further reduce the storage costs.

Ease of use

COS provides graphical programs, command line tools, protocol tools, and other methods for you to perform batch operations on stored objects, making it easier for you to use. It also offers tools that can mount buckets locally, enabling you to directly operate on objects stored in COS just like in a local file system.

Convenient Access

COS provides a wealth of simple and reliable SDK access tools and a detailed RESTful API access guide, which can help you easily transfer data over the internet. It also offers seamless migration tools to migrate your business to the cloud with speed and ease, saving you from high migration and access costs.

Service Integration

COS can be integrated with other Tencent Cloud services, such as CDN, CI, audio/video transcoding, file preview, and other components, to provide a fully integrated solution for

storage and processing. In addition, it can be used as a data pool in big data computing to provide data sources for big data analysis and computation. It can also be connected to SCF to automate event notification and processing.

Concepts

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Bucket

A bucket is a carrier of objects, which can be considered as a "container" for storing objects. You can manage buckets and configure attributes for buckets through various methods such as the Tencent Cloud console, APIs, and SDKs. For example, you can set a bucket to be used for static website hosting or set access permission for a bucket.
For more information, see Bucket Overview.

Object

An object is the basic unit of object storage, and it is stored in a bucket (for example, a photo stored in an album). You can manage objects through various methods such as the Tencent Cloud console, APIs, and SDKs. In API and SDK examples, the naming format for objects is <ObjectKey>.
For more information, see Object Overview.

APPID

APPID is a permanent unique application ID assigned to you after you sign up for a Tencent Cloud account. You can view your APPID on the Account Information page.
APPID is often used in bucket names. A complete bucket name consists of a user-defined string and APPID, connected by a hyphen "-". For example, in `examplebucket-1250000000`, 1250000000 is the APPID.

UID

APPID can also be used to generate temporary keys, specify bucket policies, or specify resources in CAM policy settings. In such cases, APPID is also referred to as UID, both of which have the same value.
For more information, see Bucket Overview, Overview, and Resource Description Method.

UIN

A UIN is an account ID. It is fixed, unique, and in one-to-one correspondence to an APPID and can be viewed in Account Information. In COS, it can be used to generate temporary keys, specify bucket policies, or specify resources in CAM policy settings. In such cases, UIN and UID are used in the same way, but they have different prefixes.
For more information, see Overview and Resource Description Method.

ACL

Access Control List (ACL) is one of the resource-based access management options, used to describe an access permission behavior. In object storage, it can be used to manage access to buckets and objects. With ACL, you can grant basic read and write permissions to other primary accounts, sub-accounts, and user groups.
For more information, see Basic Concepts of Access Control and ACL.

CORS

Cross-origin resource sharing (CORS) refers to HTTP requests where the origin of the resource that initiates the request is different from the origin of the destination resource.

SecretKey

Secret ID and Secret Key, collectively known as Cloud API key, are the security credentials required for users to access Tencent Cloud APIs for identity authentication. They can be obtained in API Key Management. Secret Key is used to encrypt the signature string and verify the signature string on the server side. Multiple Cloud API keys can be created for one APPID.

SecretId

SecretId and SecretKey, collectively known as Cloud API keys, are security credentials required for identity verification when accessing Tencent Cloud APIs. You can obtain them in API Key Management. SecretId is used to identify the API caller's identity. Multiple Cloud API keys can be created for one APPID.

policy

A policy consists of several elements and is used to describe specific information about authorization. For more information, see Overview.

Public network downstream traffic

Public network downstream traffic is the traffic generated by data transfer from COS to the client over the internet, including the traffic generated by downloading an object directly through an object link or by browsing an object at a static website endpoint.

CDN origin-pull traffic

CDN origin-pull traffic is the traffic generated by data transfer from COS to CDN edge node.

Default Domain

The default endpoint is COS origin's domain name, which is automatically generated based on the bucket name and region when you create a bucket. It's important to distinguish it from the default acceleration domain name. For more information, see Overview.

Default CDN Acceleration Domain Name

It is the domain name passing through CDN cache nodes, which is generated by default and you can choose to enable or disable. For more information, see Overview.

Custom CDN acceleration domain name

You can bind for your bucket a custom domain name to CDN and access objects in your bucket using this domain name. For more information, see Overview.

Custom origin domain name

You can bind your own domain name as a custom endpoint to the bucket for access to the objects in it. For more information, see Overview.

Data retrieval

Storage classes suitable for cold data include **STANDARD_IA** and **ARCHIVE**. To read or download data in STANDARD_IA, the backend needs to retrieve it first. ARCHIVED data cannot be read or downloaded until it is restored to the STANDARD storage class.

MAZ

Multiple Availability Zones (Multi-AZ) refers to the multi-AZ storage architecture introduced by Tencent Cloud Object Storage. Customer data is distributed across multiple different data centers within a city. In the event of a total failure of a data center due to extreme situations such as natural disasters or power outages, the multi-AZ storage architecture can still provide stable and reliable storage services for customers.
For more information, see Overview of Multi-AZ Feature.

Region

A region is a physical location where data centers are hosted on Tencent Cloud. COS data is stored in the buckets in these regions.
For more information, see Regions and Access Endpoints.

Regions and Access Endpoints

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Regions

Region refers to the distribution region of Tencent Cloud Hosted Data Centers. Data in Cloud Object Storage (COS) is stored in buckets within these regions. Through COS, you can perform multi-region storage. Typically, COS recommends you select the region closest to your business to create a bucket, meeting low delay, low cost, and compliance requirements. For example, if your business is in the South China region, then creating a bucket in the Guangzhou region can further improve object upload and download speed.

Default Domain Name

The default domain name refers to the COS default bucket domain name, which is automatically generated by the system based on bucket name and region when a user creates a bucket. Buckets in different regions have different default domain names. For more information, see the following table.

Note:

- For region information supported by previous versions, please refer to the Historical Version Region List.
- The networks between finance cloud regions and public cloud regions are not interconnected.

Chinese mainland

Regions			Abbreviation	Default Domain Name (Upload/Download/Management)
Chinese mainland	All regions	Beijing Zone 1 (sold out)	ap-beijing-1	<BucketName-APPID>.cos.ap-beijing-1.myqcloud.com
		Beijing	ap-beijing	<BucketName-APPID>.cos.ap-beijing.myqcloud.com
		Nanjing	ap-nanjing	<BucketName-APPID>.cos.ap-nanjing.myqcloud.com
		Shanghai	ap-shanghai	<BucketName-APPID>.cos.ap-shanghai.myqcloud.com

		Guangzhou	ap-guangzhou	<BucketName-APPID>.cos.ap-guangzhou.myqcloud.com
		Chengdu	ap-chengdu	<BucketName-APPID>.cos.ap-chengdu.myqcloud.com
		Chongqing	ap-chongqing	<BucketName-APPID>.cos.ap-chongqing.myqcloud.com
	Finance cloud regions	Shenzhen Finance	ap-shenzhen-fsi	<BucketName-APPID>.cos.ap-shenzhen-fsi.myqcloud.com
		Shanghai Finance	ap-shanghai-fsi	<BucketName-APPID>.cos.ap-shanghai-fsi.myqcloud.com
		Beijing Finance	ap-beijing-fsi	<BucketName-APPID>.cos.ap-beijing-fsi.myqcloud.com

Regions in Hong Kong (China) and Outside the Chinese Mainland

Regions			Abbreviation	Default Domain Name (Upload/Download/Management)
Asia Pacific	All regions	Hong Kong (China)	ap-hongkong	<BucketName-APPID>.cos.ap-hongkong.myqcloud.com
		Singapore	ap-singapore	<BucketName-APPID>.cos.ap-singapore.myqcloud.com
		Jakarta	ap-jakarta	<BucketName-APPID>.cos.ap-jakarta.myqcloud.com
		Seoul	ap-seoul	<BucketName-APPID>.cos.ap-seoul.myqcloud.com
		Bangkok	ap-bangkok	<BucketName-APPID>.cos.ap-bangkok.myqcloud.com
		Tokyo	ap-tokyo	<BucketName-APPID>.cos.ap-tokyo.myqcloud.com
Middle East		Riyadh	me-saudi-arabia	<BucketName-APPID>.cos.me-saudi-arabia.myqcloud.com

North America		Silicon Valley (US West)	na-siliconvalley	<BucketName-APPID>.cos.na-siliconvalley.myqcloud.com
		Virginia (US East)	na-ashburn	<BucketName-APPID>.cos.na-ashburn.myqcloud.com
South America		Sao Paulo	sa-saopaulo	<BucketName-APPID>.cos.sa-saopaulo.myqcloud.com
Europe		Frankfurt	eu-frankfurt	<BucketName-APPID>.cos.eu-frankfurt.myqcloud.com

Default Domain Usage Example

Assume that you have logged in to COS console as the root account (`APPID` is `1250000000`) and created a bucket named **examplebucket** in the **Guangzhou** region, the default endpoint of the bucket will be:

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

Note:

- examplebucket-1250000000: This indicates that the storage bucket belongs to a user with an APPID of 1250000000. The APPID is assigned to your account automatically upon successful registration with Tencent Cloud and is fixed and unique. You can view it in the Account Information section.
- COS: Cloud Object Storage (COS)
- ap-guangzhou: abbreviation of the bucket region
- myqcloud.com: endpoint of Tencent Cloud, fixed

If you store an image (picture.jpg) to the created bucket, the access URL of the image will be:

```
examplebucket-1250000000.cos.ap-guangzhou.myqcloud.com/picture.jpg
```

Note:

- If you have set the access permission of your image to **public read and private write**, you can copy the image access URL and paste it in the browser to view the image details.

- To replace the default domain name of a storage bucket with your own custom domain, please refer to Enabling Custom Origin Domain Name.
- To use your own domain name for accelerated access to COS resources, you can enable CDN acceleration for your domain name. Please refer to Enabling Custom CDN Acceleration Domain Name.

Global acceleration domain name

Tencent Cloud Object Storage (COS) global acceleration feature utilizes Tencent's global traffic scheduling load balancing system to intelligently route user requests, selecting the optimal network access link, and achieving nearby access for requests, accelerating data upload and download. For an introduction and usage examples of global acceleration domain names, please refer to Global Acceleration Overview and Intranet Global Acceleration.

- The global acceleration domain name format is as follows: `<BucketName-APPID>.cos.accelerate.myqcloud.com`.
- The internal global acceleration domain name format is: `<BucketName-APPID>.cos-internal.accelerate.tencentcos.cn`.

Private Network and Public Network Access

On Cloud Virtual Machines (CVM), accessing files through the COS default domain allows for private network access within the same region. In this case, uploading and downloading files generate private network traffic without incurring traffic fees. However, charges for the number of requests still apply.
If you deploy a CVM service in Tencent Cloud for private network access to COS, first ensure that the CVM and COS bucket are in the same region. Then, use the `nslookup` command on the CVM to resolve the COS domain name. If it returns a private IP, it indicates that the CVM and COS are accessed via the private network; otherwise, it is public network access. For more information on private and public network access, please refer to the Creating Requests Overview documentation.
If your Tencent Cloud CVM service is deployed in a region different from the COS bucket's region but within the scope of COS available regions, you can access files through the COS private network global acceleration domain, enabling cross-region access between CVM and COS. For more information, see Private Network Global Acceleration.

Specifications and Limits

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Type	Specifications/Limits	Detailed description
QPS	Restrictions	• READ/WRITE requests: by default, each bucket enjoys up to 30,000 QPS in public cloud regions in the Chinese mainland, and up to 3,000 QPS in any other regions. • Requests to list objects/historical versions/in-progress multipart upload tasks in a bucket: 1,000 QPS for each bucket in all regions by default. • Bucket creating/deleting/listing requests: 50 QPS for each `APPID` in all regions. • Data retrieval requests: 100 QPS for each bucket in all regions. • One-time inventory job creating requests: 1 QPS for each bucket in all regions. • Single-file upload/deletion/listing requests for traffic throttling: 50 QPS. • Single file download hotspot frequency control: 1,000 QPS. For higher QPS, please refer to Request Rate and Performance Optimization.
Bandwidth	Restrictions	Default bandwidth for a single bucket in public cloud regions in the Chinese mainland: 15 Gbit/s for both upload and download; in other regions: 10 Gbit/s for both upload and download. If the bandwidth reaches this threshold, requests will be throttled. If you have higher bandwidth requirements, please contact post-sales engineers.
Storage Type	MAZ_STANDARD/STANDARD limits	Billing restrictions: Storage time and storage units are unlimited. For specific standard storage pricing, see Product Pricing.
	MAZ_STANDARD_IA/STANDARD_IA limits	Billing restrictions: • If the storage duration is less than 30 days, it will be calculated as 30 days.

		• Storage units smaller than 64 KB are calculated as 64 KB; those equal to or larger than 64 KB are calculated based on their actual size. For specific pricing of IA storage, please refer to Product Pricing.
	MAZ_INTELLIGENT TIERING/INTELLIGENT TIERING limits	Billing restrictions: Objects smaller than 64KB will be continuously stored in the frequent access tier. Regardless of the size, individual storage files are calculated based on the actual data size. For specific pricing of intelligent tiered storage, please refer to Product Pricing.
	ARCHIVE limits	Billing restrictions: • If the storage duration is less than 90 days, it will be calculated as 90 days. • Storage units smaller than 64 KB are calculated as 64 KB; those equal to or larger than 64 KB are calculated based on their actual size. For specific ARCHIVE storage pricing, please refer to Product Pricing.
	DEEP ARCHIVE limits	Billing restrictions: • If the storage duration is less than 180 days, it will be calculated as 180 days. • Storage units smaller than 64 KB are calculated as 64 KB; those equal to or larger than 64 KB are calculated based on their actual size. For specific DEEP ARCHIVE storage pricing, please refer to Product Pricing.
Bucket	Restrictions	• Once a bucket is created, you cannot modify its name or region. • Names of buckets belonging to the same account must be unique and cannot be renamed. • The name cannot start or end with a hyphen, and can only contain lowercase English letters [a–z], digits [0–9], hyphens, or their combinations. The maximum allowed characters for a bucket name are influenced by the number of characters in the region abbreviation and APPID. The total number

		of characters in the complete request domain name must not exceed 60.
	Number of Buckets	Each root account can have up to 200 buckets by default.
	Number of objects	There is no limit on the number of objects stored in each bucket.
	Number of bucket tags	Each bucket can have up to 50 different tags.
Object	Restrictions	Object key length supports 1 – 850 bytes. For more information, see Object Overview.
	Upload	• A single object to upload via the console can be up to 512 GB. • A single object to upload via an API/SDK can be up to 48.82 TB (50,000 GB). Limits on upload APIs: ○ Simple Upload: The maximum size for a single object is 5 GB. For more information, please refer to Simple Upload. ○ Multipart upload: The maximum size for a single object is 48.82 TB, with block sizes ranging from 1 MB to 5 GB. The last block can be smaller than 1 MB, and the number of blocks can range from 1 to 10,000. For more information, please refer to Multipart Upload. • Currently, buckets with multi-AZ configuration enabled can upload multi-AZ storage types, such as Multi-AZ STANDARD and Multi-AZ INFREQUENT ACCESS. If the bucket also has intelligent tiering enabled, it can upload Multi-AZ INTELLIGENT TIERING storage type as well. • You can only upload objects to the INTELLIGENT TIERING storage class if you have enabled INTELLIGENT TIERING for the bucket. How objects are transitioned between tiers depends on the INTELLIGENT TIERING configurations.

	Replication	• Objects belonging to the same account can be copied within and across buckets.
		• Object replication within the same region is free, while cross-region replication incurs traffic fees. For more information, please refer to the traffic fee details in Pricing.
		• Copy APIs limits:
		  ○ Simple Copy: Maximum single object copy size is 5GB. For more information, please refer to Simple Copy.
		  ○ For objects larger than 5 GB, multipart copy must be used. The maximum size for a single object is 48.82 TB. For more information, please refer to multipart copy.
		• Objects in MAZ buckets cannot be replicated to an OAZ bucket.
		• Currently, you cannot copy STANDARD, STANDARD_IA, or INTELLIGENT TIERING objects to the INTELLIGENT TIERING storage class.

	Deleting domain names by batches	Up to 1,000 objects can be deleted in a single request through APIs/SDKs.
	Number of object tags	Each object can have up to 10 different tags.
Access policy	Number of polices	Each root account (APPID) can have up to 1,000 bucket ACLs.
Lifecycle	Number of polices	Each bucket can have up to 1,000 lifecycle rules.
	Storage class transition	Standard to Infrequent Access: Minimum 1 day. Standard/Infrequent Access to Archive or Deep Archive: minimum of 1 day. Note 1. Multi-AZ STANDARD and Multi-AZ IA storage do not currently support transitioning to IA storage, Archive storage, or Deep Archive storage types. 2. Lifecycle transition operations will not be executed for objects smaller than 64 KB.

	Expired object deletion	STANDARD/STANDARD_IA/ARCHIVE: At least 1 day.
SDKs		14 types: Android, C, C++, .NET, Flutter, Go, iOS, Java, JavaScript, Node.js, PHP, Python, React Native, and Mini Program SDKs.
API reserved fields		All API fields involved in the API documentation are COS reserved fields, including: acl, uploads, policy, cors, delete, versions, location, referer, lifecycle, versioning, notification, replication, website, logging, tagging, accelerate, domain, inventory, origin, object-lock, live, encryption, intelligenttiering, symlink.