Content Delivery Network

Best Practice

Product Documentation
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Overview

This document describes how to use Tencent Cloud CDN to accelerate access to CVM.

Content Delivery Network (CDN)

By delivering resources to a vast number of globally deployed cache nodes and leveraging Tencent's self-designed GSLB scheduling system, CDN enables nearby access to required resources for end users. This reduces access delays caused by network congestion, distance, and ISP issues and effectively improves the download speed, responsiveness, and user experience.

Cloud Virtual Machine (CVM)

CVM provides scalable virtual computing resources in the cloud. You can launch CVM instances on different operating systems and load them into your custom application environment. As your business needs change, you can scale your computing resources in real time and adjust your CVM instance specifications accordingly.

Content Delivery Practices

CDN can accelerate global delivery of static resources such as massive amounts of audio/video files, images, and files stored in CVM. With CDN's global cache nodes and scheduling capabilities, frequently requested resources can be delivered to edge servers in advance. When they are accessed or downloaded by end users, the cached resources on a nearby node will be returned.

CDN acceleration for CVM not only reduces the pressure on the origin server, transfer delay, and bandwidth costs, but also significantly improves the service availability.
Tencent Cloud Enterprise Content Delivery Network (ECDN) can be used to accelerate the delivery of dynamic/static resources or dynamic resources stored in CVM.

Implementation

CDN acceleration can be implemented for CVM in the following way:

Bind the CDN acceleration domain name to the CVM domain name or IP address and enable the CDN acceleration service. For detailed directions, please see Implementation via CDN Console.
Via CDN Console

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This document describes how to accelerate access to CVM instances through CDN in the console.

Prerequisites

1. You have signed up for a Tencent Cloud account and verified your identity.
2. You have activated the CVM service. For more information, please see Getting started with CVM.

Operation Guide

Adding a domain name

Log in to the CDN Console, click Domain Management on the left sidebar to enter the domain name management page, and click Create Distribution.

Configuring the domain name
1. Enter the **domain name** to be accelerated.
   Wildcard domain names are supported, such as *.test.com. Up to 10 domain names can be connected in batches in one single operation.
   The domain name should meet the following conditions:
   - ICP filing for the domain name has been obtained from the MIIT
   - The domain name has never been connected to Tencent Cloud CDN

2. Select the **project** of the domain name.
   The project is shared by all Tencent Cloud products. You can add a project in [Project Management](#).

3. Select **Origin Server Type** and enter the **Origin Server Configuration**.
   For more information on origin server types, please see [Connecting domain names to CDN](#).
   Enter your **CVM public network address** in the origin server settings.

### Configuring the acceleration service

Based on your business needs, select **Business Type** and set **Basic Configuration** and **Cache Expiration Configuration**.

---

**Domain Configuration**

<table>
<thead>
<tr>
<th>Domain</th>
<th>Please enter the acceleration domain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Add</td>
</tr>
<tr>
<td>Project</td>
<td>Default</td>
</tr>
<tr>
<td>Origin Type</td>
<td>Existing Origin</td>
</tr>
<tr>
<td></td>
<td>IPv6 NEW</td>
</tr>
</tbody>
</table>

Enter multiple origin server IPs (one per line) or ONE domain; supported ports: 0-65535
1. **Business Type**
   The business type determines the resource platform to be scheduled by the domain name. The acceleration configuration varies by resource platform. Please select a business type based on your business conditions:
   - Static acceleration: Suitable for static resource acceleration scenarios such as ecommerce, websites, and gaming images.
   - Download acceleration: Suitable for scenarios such as game installations, audio/video downloads, and mobile phone firmware package distribution.
   - Streaming VOD acceleration: Suitable for VOD acceleration scenarios.

2. **Basic Configuration**
   CDN provides the Ignore Query String switch, which allows you to control whether to filter parameters after "?" in end users' request URLs. You can use this feature for flexible version control or token-based authentication. For more information, please see Ignore query string configuration.

3. **Cache expiration configuration**
   Cache expiration configuration refers to the set of expiration rules that CDN cache nodes should comply with when caching your business content. For more information, please see Cache expiration configuration.
Completing the connection

After entering all configuration items on the Create Distribution page, click Submit to add the domain name and wait for domain name configuration to be delivered over the entire network, which usually takes 5 to 10 minutes.

Configuring CNAME

After successfully adding a domain name, You can view the acceleration CNAME assigned by CDN on the Domain Management page. You need to add a CNAME record for the domain name through your DNS service provider (such as DNSPod). Acceleration services will become available after the DNS configuration takes effect. For more information, please see CNAME Configuration.

According to regulations, if the origin server is at an accelerated domain name of Tencent Cloud CVM, the domain name configured for the host header should obtain an ICP filing through Tencent Cloud. For more information, please see Host header configuration.
CDN - COS

Overview

This document describes how to use Tencent Cloud CDN to accelerate access to COS.

Content Delivery Network (CDN)

By delivering resources to a vast number of globally deployed cache nodes and leveraging Tencent's self-designed GSLB scheduling system, CDN enables nearby access to required resources for end users. This reduces access delays caused by network congestion, distance, and ISP issues and effectively improves the download speed, responsiveness, and user experience.

Cloud Object Storage (COS)

You can store all your static resources such as static scripts, audio/video files, images, and attachments in standard storage in COS, which features unlimited capacity and high-frequency reads/writes to provide scalable and reliable storage for static resources and reduce pressure on resource servers.

Content Delivery Practices

CDN can accelerate global delivery of static resources such as static scripts, audio/video files, images, and attachments stored in COS. With CDN's global cache nodes and scheduling capabilities, frequently requested resources can be delivered to edge servers in advance. When they are accessed or downloaded by end users, the cached resources on a nearby node will be returned. This reduces both pressure on the origin server as well as transfer delay, significantly improving the user
experience.

Tencent Cloud Enterprise Content Delivery Network (ECDN) can be used to accelerate the delivery of dynamic/static resources or dynamic resources stored in COS.

### Implementation

CDN acceleration can be implemented for COS in the following ways:

- Point the COS domain name to the CDN acceleration domain name and bind your domain name to the CDN acceleration domain name (through CNAME). For detailed directions, please see Implementation via CDN Console.
- Bind your domain name to the COS domain name and enable CDN acceleration. For detailed directions, please see Implementation via COS Console.
Via CDN Console

Last updated: 2020-03-03 15:14:21

This document describes how to accelerate access to resources in COS through CDN.

Prerequisites

1. You have signed up for a Tencent Cloud account and verified your identity.
2. A COS bucket has been created. For more information, please see Creating Buckets.

Operation Guide

Adding a domain name

Log in to the CDN Console, click Domain Management on the left sidebar to enter the domain name management page, and click Create Distribution.

Selecting COS as origin server
1. Enter the **domain name** to be accelerated.

   Wildcard domain names are supported, such as `.test.com`. Up to 10 domain names can be connected in batches in one single operation.

   The domain name should meet the following conditions:
   - ICP filing for the domain name has been obtained from the MIIT
   - The domain name has never been connected to Tencent Cloud CDN

2. Select the **project** of the domain name.

   The project is shared by all Tencent Cloud products. You can add a project in Project Management.

3. Select **COS** from the **Origin Type** drop-down list under Domain Configuration.

4. Select the domain name of the corresponding **bucket**.

5. Enable **Private Bucket Access**. You should authorize the CDN service first. After the service authorization is confirmed, you can manually enable this feature.

   - COS V5 is fully deployed for connecting a COS origin server domain name to CDN. If you want to use a COS V4 bucket as an origin server, you need to go to the COS V4 Console and enable acceleration service for the corresponding bucket.
   - If your COS V5 bucket is private, you need to first allow the CDN service to access the corresponding COS bucket and then enable origin-pull access. Resources in all private
buckets will then be delivered over the CDN public network, which involves relatively high security risks.

Configuring the acceleration service

Based on your business needs, select Business Type and set Basic Configuration and Cache Expiration Configuration.

### Acceleration Service Configurations

**Service Type**
- **Static content**

The business type cannot be modified once confirmed. Please double check it before continuing.

**Basic Configuration**
- **Ignore query string**

**Cache Rules**

<table>
<thead>
<tr>
<th>Type</th>
<th>Content</th>
<th>Purge Time</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>All contents</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>File ext</td>
<td>.php.js;asp;as</td>
<td>0</td>
<td>Delete</td>
</tr>
</tbody>
</table>

1. **Business Type**

The business type determines the resource platform to be scheduled by the domain name. The acceleration configuration varies by resource platform. Please select a business type based on your business conditions:

- Static acceleration: Suitable for static resource acceleration scenarios such as ecommerce, websites, and gaming images.
- Download acceleration: Suitable for scenarios such as game installations, audio/video downloads, and mobile phone firmware package distribution.
- Streaming VOD acceleration: Suitable for VOD acceleration scenarios.
2. **Basic Configuration**
   CDN provides the Ignore Query String switch, which allows you to control whether to filter parameters after "?" in end users' request URLs. You can use this feature for flexible version control or token-based authentication. For more information, please see [Ignore query string configuration](#).

3. **Cache expiration configuration**
   Cache expiration configuration refers to the set of expiration rules that CDN cache nodes should comply with when caching your business content. For more information, please see [Cache expiration configuration](#).

**Completing the connection**
After entering all configuration items on **Create Distribution** page, click **Submit** to add the domain name and wait for domain name configuration to be delivered over the entire network, which usually takes 5 to 10 minutes.

**Configuring CNAME**
After successfully adding a domain name, you can view the acceleration CNAME assigned by CDN on the **Domain Management** page. You need to add a CNAME record for the domain name through your DNS service provider (such as DNSPod). Acceleration services will become available after **the DNS configuration takes effect**. For more information, please see [CNAME Configuration](#).
Via COS Console

Last updated: 2020-01-20 10:40:47

This document describes how to accelerate access to resources in COS through CDN in the COS Console.

Prerequisites

1. You have registered for a Tencent Cloud account and verified your identity.
2. You have activated the CDN service. For more information, please see Getting Started.

Operation Guide

Creating a bucket

For more information on how to create a bucket, please see Creating Buckets.

Configuring Acceleration

1. After creating a bucket, enter its configuration management page directly. You can also click Configuration Management in the "Operation" column of the bucket in the bucket list to enter its configuration management page.
2. Enable the default acceleration domain name.
   Generated by the system, the default acceleration domain name is the domain name passing through CDN cache nodes. You can choose to enable or disable it.
   (1) Click Edit next to the default acceleration domain name to manually enable or disable it on the default acceleration configuration page.
(2) Configure the default acceleration:

**Origin server type**: Default type is **default origin server**, but if you have enabled static website for the origin server bucket and want to accelerate content delivery for the static website, select **static website origin server**.

**Origin-Pull Authentication**: For public-read buckets, origin-pull authentication does not need to be enabled. For private-read buckets, CDN service authorization must be added and origin-pull authentication must be enabled manually. For more information, please see Enabling Origin-pull Authentication.

**CDN service authorization**: Click **Add CDN service authorization** to select and grant CDN
access to resources in the bucket.

(3) After completing the configuration, click **Save** to activate CDN acceleration.

For private-read buckets, if both origin-pull authentication and CDN service authorization are enabled, signature is not required for access to origin server via CDN, and cached resources in CDN will be distributed on the public network, which will affect data security. Therefore, we recommended you enable CDN authentication.
3. Enable **custom acceleration domain name**

You can bind a filed custom domain name to the bucket and enable CDN acceleration.

A maximum of 10 custom domain names can be added on the COS Console

(1) Click **Add domain name** in the **custom acceleration domain name** module to add a filed custom domain name.

(2) Configuration to add domain names:

**Domain Name**: Enter the custom domain name to be bound (e.g. www.example.com). Ensure that the domain name has ICP filing, and a corresponding CNAME has been configured for the domain name with the DNS service provider. For more information, please see [CNAME Configuration](#).

**Origin-Pull Authentication**: for private-read buckets, please manually enable **origin-pull authentication** to protect the origin server.

After completing the configuration, click **Save**.

For private-read buckets, if both origin-pull authentication and CDN service authorization are enabled, signature is not required for access to origin server via CDN, and cached resources in CDN will be distributed on the public network, which will affect data security. Therefore, we recommend you enable CDN authentication.
(3) After the configuration is saved, CDN authentication switch will be displayed in the **CDN Authentication** column. You can manually enable CDN authentication for the custom domain name.

**CDN Authentication**: Timestamp authentication can be configured to prevent stealing by malicious users. You can enable the feature after adding the domain name.

For more information on how to configure CDN acceleration in the COS Console, please see [Overview](#).
Regularly Storing CDN Logs

This document describes how to use Tencent Cloud SCF to create two functions in order to regularly store CDN logs into COS.

Key Steps

This document describes how to create the "storage" and "task distribution" functions, use them together, and configure a timer trigger in order to regularly store CDN logs into COS.

There are four key steps:

A. Prepare the Tencent Cloud API access key and COS information
B. Create the storage function (cdn-save-log-into-cos)
C. Create the task function (cdn-dispatch-log-jobs)
D. Configure the timer

Directions

A. Prepare the following resources before creating the functions

1. Tencent Cloud API access key

Go to the access key management page, query or create a key, and record the following information:

Access credential name (SecretId), such as AKIDRV154XXn10r58oZpmzbBOnwt47x01LRv
Access credential key (SecretKey), such as 3t0SYPHR1pjmAAUPfKM8b4yXnff4Aq56
2. COS bucket

Log in to the COS Console, access the **Bucket List** to query or create a bucket, access the bucket to view its **Basic Information**, and record the following information:

Bucket name (**Bucket Name**), such as examples-1251002854

Bucket region (**Region**), such as ap-chengdu

B. Create the storage function (cdn-save-log-into-cos)

1. Log in to the SCF Console and click **Function Service**.

2. Select **Create** and enter **cdn-save-log-into-cos** as the function name.

3. Select **Function Template**, search with the keyword "CDN", select the "cdn-save-log-into-cos" template, and click "Next" to access the function configuration page:
4. Click **Complete** to create the function.

C. Create the task function (cdn-dispatch-log-jobs)

1. Log in to the SCF Console and click **Create**.

2. Select **Function Template**, search with the keyword "CDN", and select the "cdn-dispatch-log-jobs" template.

3. Enter **cdn-dispatch-log-jobs** as the function name and click "Next".

4. Click **Complete** to create the function.
5. Click the **Function Code** tab. In the code editing box, modify the Python code by entering the following configuration information:

In the `config` variable on row 143, enter the corresponding configuration information:

- Set fields such as `secret_id`, `secret_key`, `cos_region`, `cos_bucket`, and `scf_region`.
- If you set the function name as instructed in step B and do not want to modify it, you can retain the original value of `scf_function`.
- The default value of `cdn_host` is an empty array (i.e., the logs of all domain names under the account will be stored). If needed, you can enter the list of specified domain names.
6. Click **Save**.

7. Click **Test** to check whether the code runs properly. After the testing program stops running, you can access the COS Console and check whether the corresponding logs are stored in COS.

D. Configure the timer

After you create the two functions above, the list on the SCF Console will be as shown below:

1. Click **cdn-dispatch-log-jobs** to access its details.

   ![cdn-dispatch-log-jobs](image)

2. Click the **Trigger Management** tab and click **Create a Trigger**.
3. Select **Scheduled triggering** as the trigger method, enter a custom scheduled task name, select **Every 5 mins** as the trigger period, and click **Submit**.

Once you complete all the steps above, CDN logs will be regularly stored into COS.