

# Content Delivery Network

## FAQ

### Product Documentation



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# FAQ

## FAQs about Domain Name Connection

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### How do I connect a domain name?

You can connect a domain name in the CDN Console. For more information, see [Connect a Domain Name](#).

### Does CDN support connecting to wildcard domain names?

CDN supports connection to wildcard domain names but a verification is needed. Upload the verification files provided by Tencent Cloud to the root directory of the website, and establish the connection to the wildcard domain name after the verification is completed successfully.

In addition:

1. If a wildcard domain name such as \*.test.com is already connected to Tencent Cloud, then any of its sub-domain names cannot be connected to another account.
2. If the wildcard domain name \*.test.com is already connected to your account, then wildcard domain names in formats such as \*.path.test.com cannot be connected to this account.

### How long does it take to configure CDN?

Generally, it takes no more than 30 minutes for the CDN configuration to take effect. If the configuration does not take effect within 30 minutes after configuration, you can contact us by submitting a ticket.

### Is there any requirement to connect a domain name to CDN?

Before a domain name is connected to CDN for acceleration, it must obtain the ICP license from the MIIT, and the business contents on the origin server must be legal.

### Can I configure multiple origin server IPs?

Yes. After you configure multiple IPs, CDN will randomly access one of the entered IPs when forwarding a request to the origin server. If the number of origin-pull failures with this IP exceeds the threshold, it will be isolated for 300 seconds by default and no longer used for origin-pull.

### How do I bind CNAME to a domain name after the domain name is connected to CDN?

See [CNAME Configuration](#) for how to bind CNAME with your DNS service provider.

### Why can a domain name only be disabled but not deleted?

Please check whether the user is a collaborator. The collaborator's permission is configured by the creator of the CDN service. If the creator does not assign the relevant permission to the collaborator, the collaborator cannot perform the operation. If you are sure that the user have been granted the permission, [submit a ticket](#) for assistance.

### **Will the domain name configuration be retained after the acceleration service is disabled?**

After the acceleration service is disabled, the domain name configuration is retained, but the acceleration service will cease to deliver. In this case, any request from user will be forwarded to the origin server for origin-pull.

### **Will the domain name configuration be retained after an accelerated domain name is deleted?**

After the domain name is deleted, its configuration is not retained.

### **How do I disable the acceleration service?**

You can disable the acceleration service in the CDN Console. For more information, see [Disable Acceleration Service](#).

### **How do I delete an accelerated domain name?**

You can delete the accelerated domain name in the CDN Console. For more information, see [Deleting Accelerated Domain Name](#).

### **How do I unblock a domain name?**

Please [submit a ticket](#) for this.

# FAQs about Billing

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## 1. How is CDN billed?

CDN offers two billing methods: **Bill-by-Bandwidth** and **Bill-by-Traffic**. Both methods are postpaid on a daily basis. The charge for total consumption generated during 00:00:00 - 23:59:59 on the current date is billed on the next day. For more information on how to choose an appropriate billing method, see [Billing](#).

## 2. Can I try out CDN for free?

CDN provides a 10 GB traffic package for all customers every month. You can choose the Bill-by-Traffic method and use this pack to try out CDN for free.

## 3. When is the fee of CDN deducted?

CDN is billed on a postpaid basis. The charge for total consumption generated on the current date is billed and deducted on the next day:

- when users switch from Bill-by-Bandwidth to Bill-by-Traffic on the day itself, if consumption has yet to occur, they will be charged with Bill-by-Traffic on the following day unless they switch the billing method again;
- if consumption has already occurred that day, users will still be charged with Bill-by-Bandwidth the following day. Bill-by-Traffic will apply from the second day on, postpaid on the third day going forward, unless they switch the billing method again.

If you want to change your billing method, please contact your sales rep or [submit a ticket](#).

## 4. What is the Monthly 95th Percentile Billing?

Bill-by-Bandwidth is a billing method based on peak bandwidth use.

**Monthly 95th Percentile:** There are 288 CDN bandwidth statistical points per day. Starting from the 1st day of the current month, all statistical points of valid days (when bandwidth is actually consumed) are sorted in order. The top 5% points are removed, and the remaining highest value is the billable bandwidth. The fee is then calculated based on the listing price and settlement method.

### Billing Sample:

Suppose a customer's billing officially started on February 1, 2018, and the monthly bill-by-bandwidth unit price is P USD/Mbps/month.

Assuming there are 14 days in February with over 1 Kbps bandwidth, the billable bandwidth for all 14 days has  $14 * 288$  statistical points, and the highest 5% points are removed, the highest

remaining point is the Max95, which is the billable bandwidth. So the February fee is: Max95 \* P \* 14/28 (P is subject to the actual tier, billable bandwidth in different tiers are billed according to the corresponding unit price).

## 5. How can I query my CDN bills?

You can query your bills in Tencent Cloud [Billing Center](#). For more information, see [Query Bills](#).

## 6. Can I return a purchased traffic package?

No. The CDN traffic package is immediately sent to your account upon purchase. It cannot be returned.

## 7. Can CDN be billed by number of requests?

Not yet.

## 8. What happens if I fail to pay CDN on time?

See [Arrears](#).

## 9. If the origin server uses COS, will there be charges for traffic generated by origin-pull from CDN to COS?

The traffic generated by origin-pull from CDN to COS is billed by COS instead of CDN. For more information, see the [Billing Description](#).

## 10. When CDN is disabled (or deactivated), will it generate traffic and incur fees?

When CDN is disabled, if the domain is still configured as CNAME, a 404 error is returned when the request is resolved to the node, which may generate slight traffic. We recommend changing the resolution origin-pull before suspending the service.

# Functional Feature

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## **Does Tencent Cloud CDN have the acceleration capability on a global scale?**

Yes. Tencent Cloud CDN has opened access to over 100 cache nodes accumulated over the past decade, across more than 30 countries and regions, providing customers with the acceleration capabilities on a global scale.

## **Do changes need to be made to origin server for the acceleration service to apply after the connection to CDN?**

Basically, no change is needed. However, in order to achieve a better acceleration result, we recommend that you assign static and dynamic files to different domain names and only accelerate the static resources.

## **Does Tencent Cloud CDN support cross-region access?**

Yes. No restriction is imposed on cross-region access in Tencent Cloud CDN. If cross-region access is needed for your website, you simply need to configure the Access-Control-Allow-Origin field in your website, or configure cross-region headers for your domain name in the CDN. For more information, see [HTTP Header Configuration](#).

## **Where can I download the CDN access log?**

You can download the CDN access log in the CDN Console. For more information, see [Download Log](#).

## **How do I use the Fault Self-diagnosis tool?**

You can use the Fault Self-diagnosis tool to test DNS resolution, link quality, site availability and data access consistency for the accessed domain names. For more information, see [Fault Self-diagnosis](#). This tool is subject to the configuration of your local network environment and cannot fully represent the results of internet-wide testing.

## **What is the difference between the local access diagnostics and the user access diagnostics?**

**Local Access Diagnostics:** When you find an error with one of your resource accesses, you can initiate a test with the Local Access Diagnostics.

**User Access Diagnostics:** When your users report an error with resource access, you can pinpoint the problem through "User Access Diagnostics" and solve the problem by performing the actions suggested by Tencent Cloud.



**Does CDN support POST requests?**

Yes. CDN supports POST requests.

**Does CDN support the origin server's Cache-Control setting?**

By default, Tencent Cloud CDN supports origin server's Cache-Control setting.

**Does CDN support GZIP compression?**

CDN compresses the files with a size between 256 Byte and 2048 KB and a filename extension of .js, .html, .css, .xml, .json, .shtml, and .htm to Gzip files to help you reduce your traffic.

**Does CDN support ports other than 80 for acceleration?**

CDN accelerator supports ports 80, 443 and 8080.

**What is a CDN intermediate server?**

CDN intermediate server is an intermediate-layer origin-pull server located between the customer server and CDN node. The intermediate server converges the node's origin-pull requests to reduce the origin-pull pressure on your origin server.

**How do I obtain the real client IP?**

You can do so by configuring the x-forward-for header. Please contact us by [submitting a ticket](#).

# FAQs about Cache Configuration

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## What is cache expiration configuration?

Cache expiration configuration refers to a set of expiration policies the CDN cache nodes should follow when caching your business contents.

All resources cached on CDN nodes have an expiration time. For resources in normal status, when a request reaches the node, the node will directly return the requested resource to the user, so as to speed up the resource acquisition. For expired resources, the node will forward the user request to the origin server, reacquire the resource and cache it to the node, and then return it to the user. A reasonable cache validity period can effectively improve the resource hit rate and lower the origin-pull rate, reducing bandwidth usage.

## How do I control the file cache time in a browser?

Tencent Cloud CDN supports the Cache-Control configuration on the origin server by default, but configuration of the Cache-Control header is not supported. Max-age cannot be configured on CDN nodes, but CDN nodes can inherit the origin server's max-age. To configure max-age on CDN nodes, you only need to configure the max-age on the origin server.

## How do I adjust the priority of cache configuration?

For more information, see [Priority Adjustment](#).

## I use my own server as the origin server of CDN. Can I configure to not cache a specific type of files? Can I set the cache period to "0" to disable caching?

You can configure different cache validity periods for different types of directories and files. If the cache validity period is configured to 0, the CDN node will not cache the resource, in which case the CDN node needs to pull related resources from the origin server every time the users send access request to the node. For more information on cache configurations, see [Cache Expiration Configuration](#).

## Which cache expiration configuration does Tencent Cloud support?

Tencent Cloud CDN supports cache validity period configuration at various dimensions, custom priority adjustment, and cache inheritance policies (advanced cache configuration). A reasonable cache validity period can effectively improve the resource hit rate and lower origin-pull rate, reducing bandwidth usage.

## What is the default cache configuration of CDN?

Default configuration is as follows when a domain is connected:

- Own origin domain connection: By default, the cache validity period for all files is 30 days, except general dynamic files (such as .php, .jsp, .asp, .aspx), for which the cache validity period is 0 by default, which means any request for such files will be directly forwarded to the origin server.
- COS origin domain connection: By default, the cache validity period for all files is 30 days;
- Advanced cache expiration configuration is disabled by default.

## What are cache inheritance policies?

When a user makes a request for a certain business resource, the origin server's Response HTTP Header includes the Cache-Control field. The default policy is as follows:

- If the Cache-Control field is `max-age`, the cache validity period for this resource is subject to the one set for the resource, instead of inheriting the value specified by `max-age`.
- If the Cache-Control field is `no-cache` or `no-store`, the CDN node does not cache the resource.

## What are cache matching rules?

When multiple caching policies are set, the priorities of the entries are determined on a bottom-to-top basis, with the entry at the bottom of list having the highest priority and the one at the top having the lowest priority. For example, if the following caching policies are set for a domain:

```
All files (30 days)
.php .jsp .aspx 0 seconds
.jpg .png .gif 300 seconds
/test/*.jpg 400 seconds
/test/abc.jpg 200 seconds
```

If the domain is `www.test.com`, and the resource is `www.test.com/test/abc.jpg`, the matching rule will be as follows:

1. Match with the first entry. It is hit, so the cache validity period is 30 days.
2. Match with the second entry. It is not hit.
3. Match with the third entry. It is hit, so the cache validity period is 300 seconds.
4. Match with the fourth entry. It is hit, so the cache validity period is 400 seconds.
5. Match with the fifth entry. It is hit, so the cache validity period is 200 seconds.

The final cache validity period is subject to the last matching result, 200 seconds.

# FAQs about Cache Purge

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## 1. What is cache purge?

Cache purge includes URL purge, directory purge, and URL prefetch. (For more information, see [Cache Purge](#).)

- URL purge means to purge the cache on a file-by-file basis.
- Directory purge means to purge all the files under a directory on a file-by-file basis.
- URL prefetch means to prefetch resources on a file-by-file basis.

Purge vs. prefetch:

- After purge, the resource cached on the CDN nodes across the network are deleted. When a user's request reaches a node, the node will pull the requested resource from the origin server and then cache it while returning it to the user. In this way, it can be guaranteed that the user can get the up-to-date resources.
- After prefetch, the resource is cached on the CDN nodes across the entire network in advance. When a user's request reaches a node, the user can directly get the resource from the node.

## 2. What are the requirements for cache purge? How long does it take effect?

Cache purge includes URL purge, directory purge, and URL prefetch.

**URL purge:** A maximum of 10,000 URLs are allowed to be purged each day and a maximum of 1,000 URLs are allowed to be submitted for each purge. It takes about 5 minutes for the purge to take effect. If the cache validity period set for the file is less than 5 minutes, it is recommended to wait for the timeout and update, instead of using the purge tool.

**Directory purge:** A maximum of 100 directories are allowed to be purged each day and a maximum of 20 URL directories are allowed to be submitted for each purge. It takes about 5 minutes for the purge to take effect. If the cache validity period set for the folder is less than 5 minutes, it is recommended to wait for the timeout and update, instead of using the purge tool.

**URL prefetch:** This feature is only available for key CDN customers. If the resource has been cached on the node and has not expired, it will not be updated to the latest one. If you need to update the resources on all CDN nodes to the latest ones, you can purge them before prefetch. A maximum of 1,000 URLs are allowed to be prefetched each day and a maximum of 20 URLs are allowed to be submitted for each prefetch. It takes about 5 to 30 minutes for the prefetch to take effect, depending on the file size.

## 3. Will the cached content on CDN cache nodes be updated in real time?

No. The cached content on CDN cache nodes are updated based on the [cache expiration configuration](#) you set in the console. If you need to update a file's cache in real time, do it by [purging cache](#).

#### **4. Is directory purge supported by CDN?**

Yes. CDN supports URL purge, directory purge, and URL prefetch.

Method 1: [Purge the directory](#) in the CDN Console. For more information, see [Cache Purge](#).

Method 2 : Purge the URL by calling the API. For more information, see [URL Purge](#).

#### **5. How do I view the cache purge record?**

You can check the cache purge history in the CDN Console. For more information, see [History](#).

#### **6. Why doesn't directory prefetch or purge take effect?**

Please check whether the Last-Modified of the origin server has changed; if so, the origin-pull will fail. If you are unable to solve the problem, please [submit a ticket](#) for assistance.

# FAQs about Statistical Analysis

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## How is the bandwidth statistics in access monitoring collected?

Each CDN node collects traffic data in real time and reports it to the computing center which aggregates the data into total traffic data and displays the bandwidth statistics by dividing the total traffic by the duration of use.

### Example:

- If the total traffic generated in a minute is 6 MB, then the corresponding bandwidth is  $(6 * 8) / 60 = 0.8$  Mbps.
- As the usage for bill-by-bandwidth is calculated based on the statistics with a 5-minute granularity, the corresponding bandwidth value is total traffic in 5 minutes / 300 seconds.

## Why is the traffic in the monitoring information different from that in the log?

The traffic counted based on the downstream bytes in the log of an accelerated domain name is only about the data at the application layer, while the traffic generated by the actual data transferring over the network is around 5% to 15% more than application-layer traffic.

- Consumption by TCP/IP headers: In TCP/IP-based HTTP requests, each packet has a maximum size of 1,500 bytes, including TCP and IP headers of 40 bytes, which generate traffic during transfer but cannot be counted by the application layer. The overheads of this part is around 3%.
- TCP retransmission: During normal data transfer over the network, around 3% to 10% packets are lost on the internet, and the server will retransmit the lost ones. This type of traffic cannot be counted by the application layer, which accounts for 3% to 7% of the total traffic.

As an industry standard, the billable traffic is the sum of the application-layer traffic and the overheads as described above. Tencent Cloud CDN takes 10% as the overheads proportion, so the monitored traffic is around 110% of the logged traffic.

## How do I calculate the traffic hit rate?

By default, CDN enables L2 cache (edge layer and intermediate layer). As long as a request hits either layer for response, it is counted as a CDN node hit.

Traffic hit rate = (total downstream traffic - origin-pull traffic) / total downstream traffic.

## How do I fix the low traffic hit rate issue?

- Check whether the cache is purged: Cache purge clears the specified content on the node, leading to temporarily low traffic hit rate.

- Check whether new resources are put into the origin server: High amounts of new resources may cause origin-pulls by CDN, leading to low traffic hit rate.
- Check whether the origin server works properly: If it is malfunctioning with a lot of 4XX or 5XX error, the traffic hit rate will be affected.
- Check whether the cache expiration policy is correctly configured: View the **Cache Expiration Configuration** section on the Cache Configuration page in the console. The cache expiration policies are displayed in ascending order in terms of priority, i.e., a policy takes precedence over the one above it.
- Check whether Range GETs is enabled: Check the **Range GETs** section on the Origin-pull Configuration page in the console. If it is disabled, files will be pulled in their entirety instead of multiple parts as requested during origin-pull, which increases the origin-pull traffic and lowers the hit rate.
- Check whether Ignore Query String is enabled: View the **Ignore Query String** section on the Access Configuration page in the console. If it is disabled, caching will be performed based on the full path. In this case, if the same resource are requested by different parameters, it cannot be matched and will be cached multiple times, which lowers the traffic hit rate.

### Do status code statistics include all the status codes?

Yes. In the new version of CDN statistical analysis, monitoring curves are drawn for all status codes generated by origin servers, making it easier for you to troubleshoot.

### How are district and ISP statistics calculated?

The district and ISP statistics are calculated based on the client IPs in the access log. As the calculation is completed based on the log, the simply accumulated billable data varies from the billable data when **all districts** or **all ISPs** is selected. For details, see **question #2 above**.

# FAQs about HTTPS

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## 1. What is HTTPS?

HTTPS refers to Hypertext Transfer Protocol Secure, which is a security protocol that encrypts and transfers data based on the HTTP protocol to ensure the security of data transfer. When configuring HTTPS, you need to provide the certificate for the domain name and deploy it on the CDN nodes across the network to implement the encrypted data transfer across the network.

## 2. Does CDN support HTTPS configuration?

Tencent Cloud CDN fully supports HTTPS configuration. You can either upload your own certificate for deployment or go to the [SSL Certificate Service Console](#) to apply for a third party certificate that is provided by TrustAsia free of charge.

## 3. How do I configure HTTPS certificate?

You can configure the HTTPS certificate in the CDN Console. For more information, see [HTTPS Configuration](#).

## 4. Do the HTTPS certificates on CDN nodes need to be synchronized with HTTPS certificate updates on origin server?

This depends on your origin-pull method.

HTTP Forwarding: Synchronization is not needed.

HTTPS Forwarding: When the certificate on origin server is updated, the certificates on the CDN nodes need to be updated synchronously. The certificate between client and node must be identical to the one between node and origin server. Otherwise, a failure of origin-pull will occur.

## 5. Is there any way for users to allow only HTTPS access and forbid HTTP access?

You can use Forced HTTPS Redirection. After the certificate is configured successfully, the **Forced Redirect** option appears. When it's enabled, even if you initiate an HTTP request, it will be changed to an HTTPS



request.

### HTTPS Configuration

HTTPS provides ID verification for network service, in order to protect the privacy and integrity of data exchange. [What's HTTPS?](#)

Forced HTTPS Redirection:

Certificate source	Certificate remark	Expiry Time	Origin-Pull method	Certificate status	More Actions
Own certificate			Follow protocol	Configuration succ...	<a href="#">Configure Now</a>

# FAQs about Node Network

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## How long is the default timeout for Tencent Cloud CDN nodes?

10 seconds.

## What will happen to the files on the CDN node if I close the connected domain from CDN management?

If you close the CDN service of a domain which has already been connected to CDN, the CDN node will retain the connection configurations of the domain, no further CDN traffic will be generated, and all requests towards this domain will be forwarded to the origin server. Before this operation, make sure that:

- You have configured the CNAME of this domain based on A record, otherwise the domain cannot be accessed.
- Your origin server has enough bandwidth processing capabilities, otherwise your domain name may not be accessible.

## What should I do if I cannot open my website after connecting to CDN?

First, check if the CDN status of the connected domain is "Closed". The website will not function if status is "Closed". Proceed the next step if the status is not "Closed":

- Use ping or nslookup to check whether the CNAME resolution of the domain has taken effect. If CNAME is not added, please go to your DNS provider to add the CNAME as instructed by [CNAME Configuration](#).
- After CNAME takes effect, check if you can access the origin server normally.

If the problem is not solved after following the above steps, please [submit a ticket](#).

## How do I tell which CDN node are the users accessing?

You can acquire basic troubleshooting information such as the IP, latency and lost packet of the CDN node accessed by users by using the commands ping and nslookup.

## Why do I have a low hit rate?

This is generally caused by the following reasons:

- Cache configuration problem, such as short cache validity period;
- HTTP Header prevents caching. Check the origin server's Cache-Control or Expires configurations;
- Few cacheable content for the origin server type;

- Website has less visits and low validity period. Low hit rate for files leads to frequent origin-pull requests.

## How do I tell whether a user access has hit the CDN Cache?

View the `X-Cache-Lookup` information in the header of the request return. If multiple `X-Cache-Lookup` entries are returned at the same time, that is normal. If `Hit From MemCache` / `Hit From Disktank` is returned, it means the CDN cache is hit.

```
▼ Response Headers    view source
Cache-Control: max-age=864000
Connection: keep-alive
Content-Length: 10
Content-Type: text/css
Date: Wed, 18 Mar 2015 08:22:34 GMT
Expires: Sat, 28 Mar 2015 08:22:34 GMT
Last-Modified: Tue, 17 Mar 2015 05:35:17 GMT
Server: NWS_Appimg_HY
X-Cache-Lookup: Hit From Disktank
```

- `X-Cache-Lookup:Hit From MemCache`: Memory of the CDN node is hit.
- `X-Cache-Lookup:Hit From Disktank`: Disk of the CDN node is hit.

## Why are the sizes of files with the same name returned by the node different?

As all file types are cached by default, there may be different versions for a file on the CDN node. To solve this problem:

- Manually purge files and update cache immediately.
- Use a version number, for example: `http://www.xxx.com/xxx.js?version=1`.
- Change the file name to avoid using files with the same name.

If the problem is not solved after following the above steps, please [submit a ticket](#).