CDN

FAQs

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Security Declaration

Vulnerability

Huawei's regulations on product vulnerability management are subject to the *Vul. Response Process.* For details about this process, visit the following web page:

https://www.huawei.com/en/psirt/vul-response-process

For vulnerability information, enterprise customers can visit the following web page:

https://securitybulletin.huawei.com/enterprise/en/security-advisory

Contents

1 Functions

1.1 What Is Whole Site Acceleration?

Whole site acceleration (WSA) is a good option for websites that consist of both dynamic and static content and for sites that involve a large number of ASP, JSP, or PHP requests.

WSA accelerates delivery of both dynamic and static content. Static content can be served from nearby points of presence (PoPs), whereas dynamic content is pulled from the origin server through the fastest possible route.

Typically, WSA loads dynamic pages more quickly by bypassing congested routes.

- If you enable WSA, in addition to the basic cost, requests will be billed ($0.023 USD for 10,000 requests). For details, see **Pricing Details**.
- You can enable WSA for a domain name on the **Domains** page of the Content Delivery Network (CDN) console.

1.2 What Service Types Does CDN Support?

- Website acceleration

  CDN is perfect for web portals, e-commerce platforms, information apps, and UGC-focused apps. It can accelerate the delivery of images and small HTML, CSS, and JS files.

- File download acceleration

  CDN is suitable for websites, game clients, and app stores that provide file download services, and download tools. It is used in scenarios such as downloading game installation packages and application packages, and updating the ROM on mobile phones.

- On-demand service acceleration

  For customers providing on-demand audiovisual services, CDN is a must. On-demand services include online education, video sharing, music or video on demand, and other audiovisual content.

- Whole site acceleration

CDN is a good option for websites that consist of both dynamic and static content and for sites that involve a large number of ASP, JSP, or PHP requests.

Example:

– If both on-demand service acceleration and file download acceleration are required, only one service type can be selected for an acceleration domain name. You need to create two domain names, one for on-demand service acceleration and the other for file download acceleration.

1.3 Does CDN Support DNS, HTTPDNS, and IP302 Scheduling?

Yes. CDN supports domain name server (DNS), HTTPDNS, and IP302 scheduling. You can configure DNS scheduling by yourself. To configure HTTPDNS or IP302 scheduling, submit a service ticket. The following table lists the differences between the three scheduling types.

Scheduling Type	Description
DNS	A DNS system is a natural distributed structure. Both the clients and local DNS (LDNS) can implement cache. The architecture itself can achieve high scalability and performance. When DNS scheduling is used, CDN determines the client location based on the LDNS address and schedules the request to the nearest server.
HTTPDNS	The HTTPDNS technology enables clients to bypass carriers' LDNS and directly use HTTP to access the scheduling system and request the optimal access PoP. This prevents service security problems caused by DNS hijacking.
IP302	Client IP addresses and content addresses can be directly obtained, enabling precise scheduling.

1.4 Which Protocols Does CDN Support?

Domain names whose service area is outside the Chinese mainland or global:

● CDN supports HTTP and HTTPS. It does not support FTP, TCP, or UDP.

● CDN supports WebSocket for whole site acceleration domain names (without special configurations).

Domain names whose service area is the Chinese mainland:

● For non-whole site acceleration domain names, CDN supports HTTP and HTTPS. It does not support FTP, TCP, UDP, or WebSocket.

● For whole site acceleration domain names, CDN supports HTTP, HTTPS, and WebSocket. It does not support FTP, TCP, or UDP.

● CDN supports acceleration using layer 4 protocols, such as proprietary TCP and UDP. This function is in alpha test. For details about the open beta test (OBT) time and enabling method, stay tuned for the service announcement.

Acceleration for requests using the WebSocket protocol is in OBT and is available for free trial.

1.5 Does On-Demand Service Acceleration Support HLS and RTMP?

On-demand service acceleration supports the HLS protocol but does not support the RTMP or FLV protocol.

1.6 Can CDN Identify Whether a User Is on a Desktop or Mobile Device?

No.

You need to distinguish the content for mobile and desktop devices on your origin servers. If a CDN PoP caches the content for mobile devices, when a user accesses that content, the CDN PoP directly serves the content. The same goes for content cached for desktop devices.

1.7 Does CDN Support Acceleration for a Single Web Page?

Yes.

To accelerate delivery of some website resources, you need to set a domain name for them and configure CDN acceleration for the domain name according to **Access Process**.

1.8 Does CDN Support Binary File Acceleration?

Yes. CDN can accelerate binary file downloads. When adding a domain name to CDN, set **Service Type** to **File download**. For details, see **Access Process**.

1.9 Does CDN Support Level-2 Domain Name Acceleration?

Yes.

If a level-2 domain name needs acceleration in the Chinese mainland, its level-1 domain name must have been licensed by MIIT. If the level-2 domain name needs acceleration only outside the Chinese mainland, the licensing is not required.

1.10 Does CDN Accelerate POST Requests?

POST requests are dynamic interaction requests. If you have only configured website acceleration, download acceleration, or on-demand service acceleration, CDN does not accelerate these requests.

However, you can configure whole site acceleration if your website contains a lot of dynamic content. Whole site acceleration accelerates delivery of both dynamic and static content. Static content can be served from nearby PoPs, whereas dynamic content is pulled from the origin server through the fastest possible route.

1.11 Does CDN Have a Speed Limit?

There is no default speed limit for acceleration domain names. You can configure one by referring to **Request Rate Limiting**.

1.12 Does CDN Accelerate Local Access to Shopping Websites?

No.

However, if a website owner uses CDN to speed up the website, their customers will be able to access the website more quickly.

1.13 What Origin Types Does CDN Support?

CDN supports origin IP addresses, object storage bucket domain names, and origin domain names. An origin server can be deployed on Huawei Cloud, other clouds, or Internet Data Centers (IDCs). There is no requirement on the location of the origin server.

If you use an object storage bucket of a non-Huawei Cloud service provider as the origin server, configure the origin server on the CDN console by referring to **How Do I Configure an Origin Server When It Is a Non-Huawei Cloud Object Storage Bucket?**

1.14 Does CDN Support Domain Names That Contain Chinese Characters?

No. When adding domain names to CDN:

- A domain name contains up to 75 characters, including letters, digits, hyphens (-), and periods (.).
- You can add up to 100 domain names under each account.
- An acceleration domain name must be unique.

- CDN does not allow websites containing illicit content. The existing domain names connected to CDN are reviewed regularly. If a domain name involves any violations, CDN acceleration will be disabled for all domain names in the same account.

1.15 Does Huawei Cloud CDN Support HTTP/3?

Yes. You can enable QUIC on the CDN console so that clients can use HTTP/3 to access CDN PoPs.

1.16 Does Huawei Cloud CDN Support Content Encryption Before Distribution?

No. CDN only provides content distribution acceleration.

1.17 Does Huawei Cloud CDN Support Intranet Acceleration?

No.

CDN requires DNS resolution to forward domain access requests to PoPs, which cannot be completed for private domain names.

1.18 Can CDN Provide All PoP IP Addresses and Origin IP Addresses?

No. The public IP address of a CDN PoP changes from time to time due to maintenance. IP addresses of offline PoPs are useless since these PoPs no longer provide services.

1.19 Can I Migrate Domain Configurations in One Account to Another Account?

No.

You can remove the domain name from the existing account and add it to the new account.

> **NOTE**
>
> Before removing a domain name, switch services back to the origin server to prevent service interruption.

1.20 Is the Principle of Accelerating Delivery of Static and Dynamic Content the Same?

No.

- Static content is cached on CDN PoPs so that users can obtain the content from the nearest CDN PoP.
- Dynamic (pseudo-static) content is directly pulled from the origin server. Technologies such as intelligent routing, multi-line origin pull, and protocol optimization are used to accelerate origin pull.

If your website contains a lot of dynamic and pseudo-static content, you can use whole site acceleration, so that CDN loads dynamic pages more quickly by bypassing congested routes.

1.21 How Do I Stop the CDN Service?

You can stop the CDN service in the following two scenarios.

Scenario	Operation	Description
Suspending the CDN acceleration service	**Disabling CDN for a Domain Name**	To temporarily stop the acceleration service for a domain name, you can disable CDN for the domain name. Domain name settings are still retained. If the local DNS of a user has cached the resolution record or the user binds the domain name with a CDN PoP in the **hosts** file to forcibly resolve requests, CDN will refuse to provide services for the user after receiving the requests. However, the corresponding traffic and request data will be generated.
Permanently stopping the CDN acceleration service	**Deleting a Domain Name**	To permanently stop the acceleration service for a domain name, you can delete the acceleration domain name. All settings of the domain name will be deleted from CDN PoPs and the domain name will no longer be charged by CDN.

☐ NOTE

Before disabling CDN for a domain name or deleting a domain name, resolve the domain name to the origin server to prevent service loss.

1.22 What Is the Maximum Size of a File to Be Uploaded to CDN?

The file size limit is 300 MB. CDN and you will be billed for traffic used for file upload.

1.23 Does CDN Support Frequency Control?

No.

1.24 Does CDN Support Real-Time Monitoring?

Yes. CDN can **report data to Cloud Eye**, so that you can view basic data (such as traffic, bandwidth, and status codes) of domain names under your account in real time and set alarms.

1.25 Does CDN Support Access Through Fixed IP Addresses?

No.

No. CDN PoPs have a large number of IP addresses, which may change irregularly. PoPs may be maintained or go offline. Fixed IP addresses may be unreachable at any time. Access CDN through DNS resolution by following instructions in **Getting Started**.

2 Usage

2.1 How Do I Enable CDN?

To enable CDN:

1. Register a HUAWEI ID and complete real-name authentication. Real-name authentication is not required if your service area is **Outside Chinese mainland**.

2. Buy a CDN traffic package to deduct traffic generated.

3. After buying a traffic package, **enable CDN**. Then you can use CDN for acceleration.

2.2 How Do I Control and Assign CDN Permissions by Project?

You can use enterprise projects to assign CDN permissions so that users in each project can use an individual domain name.

Huawei Cloud Enterprise Management service provides unified cloud resource management based on enterprise projects, and resource and personnel management within enterprise projects. Enterprise projects can be managed by one or more user groups. You can create CDN enterprise projects on the Enterprise Management console to manage your domain resources in a centralized manner. For details, see **Creating an Enterprise Project and Authorizing User Groups**.

2.3 How Do I Grant Some CDN Permissions to IAM Users?

You can use IAM to implement fine-grained permissions management. IAM provides identity authentication, permissions management, and access control, helping you secure access to your Huawei Cloud resources.

Check all CDN permissions and grant permissions to IAM users by following instructions in **Permissions Management**.

2.4 Is the CDN Service Area Related to the Origin Server Location and ICP Filing?

CDN service area and origin location

- The service area of a domain name has nothing to do with the origin location.

CDN service area and ICP filing

- Whether a domain name needs to be licensed does not depend on the region of the domain name provider or the area where the website server is. All that matters is the service area of your domain name. If the service area includes the Chinese mainland, the domain name must be licensed by the MIIT before being added as an acceleration domain name.
- If your service area is outside the Chinese mainland, ICP filing is not required.

2.5 Will User Access from Other Regions Be Accelerated If I Select Chinese Mainland or Outside the Chinese Mainland as My Service Area?

- If you select **Chinese mainland**, users outside the Chinese mainland can also access CDN PoPs in the Chinese mainland. However, due to cross-border network conditions, the acceleration will not be as noticeable as it is for

access from within the Chinese mainland. In the worst-case scenario, your domain name may become inaccessible.

- If you select **Outside Chinese mainland**, users in the Chinese mainland can also access CDN PoPs outside the Chinese mainland. However, due to cross-border network conditions, the acceleration will not be as noticeable as it is for access from within the Chinese mainland. In the worst-case scenario, your domain name may become inaccessible.

2.6 Does CDN Support Acceleration by Region?

No. However, you can configure DNS settings at the domain name provider to redirect requests from a certain region to CDN PoPs, so that acceleration can be implemented only for this region.

2.7 What Is the Conversion Rule for Traffic and Bandwidth?

CDN charges you for the basic traffic or bandwidth service fee. The default conversion rules are as follows:

- Traffic: 1 GB = 1,024 MB
- Bandwidth: 1 Mbit/s = 1,000 kbit/s

2.8 Does CDN Accelerate Access to the Origin Server of a Website, or Accelerate Access to the Domain Name?

CDN accelerates user access to domain names.

After a domain name is connected to CDN for acceleration, when a user accesses resources under the domain name, the request is forwarded to the PoP nearest to the user through DNS resolution. In this way, user access is accelerated.

2.9 Can Wildcards Be Used as Part of an Acceleration Domain Name?

Yes. A wildcard, *****, allows multiple secondary domain names to be included by the same value. All these secondary domain names point to the same IP address. For example, if you add ***.test.com** to CDN as an acceleration domain name and have it resolved to the CNAME provided by CDN, CDN acceleration will apply to all level-2 domain names under ***.test.com**, such as **a.test.com**, by default. However, CDN acceleration will not apply to level-3 domain names such as **b.a.test.com**.

The following are the rules for adding wildcards to domain names:

- If you add a wildcard domain name to a particular account, you cannot add any of the level-2 domain names under that domain name to other accounts.
- You will be billed for the acceleration service provided to all of the level-2 domain names under a wildcard domain name. If there are multiple level-2

domain names, billing will be based on the traffic generated by the domain name with the wildcard, not on each of the level-2 domain names.

You can log in to the CDN console, choose **Domains** in the navigation pane, and click **Add Domain Names** to configure a wildcard domain name.

2.10 What Are the Differences in CDN Acceleration Among the Three Service Areas?

The only difference is that the PoPs providing acceleration services locate in different areas.

- Acceleration in the Chinese mainland:

  Only PoPs in the Chinese mainland provide acceleration services for your acceleration domain name. Users can access the nearest PoPs in the Chinese mainland. PoPs outside the Chinese mainland do not provide the acceleration service.

- Acceleration outside the Chinese mainland:

  Only PoPs outside the Chinese mainland provide acceleration services for your acceleration domain name. Users can access the nearest PoPs outside the Chinese mainland. The PoPs in the Chinese mainland do not provide the acceleration service.

- Global acceleration: Both PoPs outside and in the Chinese mainland provide acceleration services for your domain name, so that users can get what they want from the PoP nearby.

  ☐ **NOTE**

  Outside Chinese mainland indicates countries and regions other than the Chinese mainland, including Hong Kong (China), Macao (China), and Taiwan (China).

2.11 Can I Use the CDN SDKs?

No. CDN SDKs are unavailable for Huawei Cloud (International) users.

2.12 How Do I Select the Service Area If the Server Is Outside the Chinese Mainland but My Web Visitors Are in the Chinese Mainland?

You are advised to select **Chinese mainland** as **Service Area**.

Because:

- If users in the Chinese mainland access your domain name, users are redirected to nearby CDN PoPs. They will experience notable acceleration.

- If users outside the Chinese mainland access your domain name, they are also redirected to CDN PoPs in the Chinese mainland because your service area is Chinese mainland. The acceleration will not be as noticeable as it is for access from within the Chinese mainland. In the worst-case scenario, your domain name may become inaccessible.

2.13 Is CDN Necessary If My Services Are Deployed Within a City?

Yes. CDN has different lines. Its carrier partners have their own PoPs. Using CDN to cache static resources on different PoPs can relieve the pressure on your origin server and improve user experience.

2.14 How Does CDN Determine the Region to Which a User Belongs?

Huawei Cloud CDN uses Local Domain Name Server (LDNS) to determine the region to which a user belongs.

2.15 How Do I Direct Traffic from a Third-Party Platform to CDN?

Add your domain name to CDN. Test your domain name before adding a CNAME record. For details, see **Testing the Domain Name**. After the test is successful, add the CNAME provided by CDN to your domain's DNS records. For details, see **Configuring a CNAME Record**.

2.16 Can an Acceleration Domain Name Be Configured with Multiple Origin Servers?

Yes.

You can configure origin servers in primary/standby mode. One origin server is selected as the primary origin server, and the others as standby ones. For details, see **Origin Server Settings**.

2.17 Can File Upload Be Accelerated?

You can use whole site acceleration to accelerate file upload. Whole site acceleration uses the dynamic acceleration technology to intelligently select the optimal route to your origin server. Whole site acceleration also leverages the internal network transmission for faster file upload.

2.18 Can Users in the Chinese Mainland Access Origin Servers and Users Outside the Chinese Mainland Access CDN?

If your DNS server supports region-specific DNS resolution, you can configure the DNS settings as follows:

1. Add a domain name outside the Chinese mainland. The origin address is set to the IP address or domain name of your server.

2. Resolve domain names by region.

   – Requests from the Chinese mainland are redirected to the server IP address indicated by the A record.

   – Requests from outside the Chinese mainland are redirected to the CNAME generated by CDN.

2.19 Can I Use CDN If the Origin Port Is Not 80?

Yes. The origin port is customizable. You can modify the origin port on the CDN console. For details, see **Modifying Origin Server Details**.

2.20 Can I Use Global Acceleration If My Origin Server Is in the Chinese Mainland?

Yes.

The service area of a domain name has nothing to do with the origin server location. If you want to use global acceleration, select **Global** for **Service Area** when adding a domain name.

2.21 How Do I Configure an Origin Server When It Is a Non-Huawei Cloud Object Storage Bucket?

1. Obtain the domain name of your bucket. Add a domain name on the CDN console, set the origin server type to **Domain name**, and enter the obtained bucket domain name.

2. By default, the host for origin pull is your acceleration domain name. If you configure an object storage bucket as your origin server, change the host to the domain name of that object storage bucket. Otherwise, origin pull will fail.

2.22 Does CDN Accelerate User Access from a Specified Line?

No.

Among all the requests for your domain name, CDN cannot accelerate access from a specific line, for example, China Telecom.

2.23 What If the ICP License of My Acceleration Domain Name Expires?

Impacts

1. If you obtain a new license before the original one expires, your CDN service will not be affected.

2. If a license has expired and you have not obtained a new license, CDN bans the domain name and the acceleration service for it.

Solutions

1. Apply for a new license from the Ministry of Industry and Information Technology (MIIT).

2. Have your domain name reviewed.

    After your domain name has reviewed, you can enable CDN for the domain name. You can apply to review the domain name on the CDN console. For details, see **Reviewing a Domain Name**.

2.24 What Are the Differences Between an Acceleration Domain Name and an Origin Domain?

- An acceleration domain name is provided for acceleration, that is, the domain name accessed by users.

- An origin domain corresponds to the server IP address. It is accessed by CDN during origin pull.

The acceleration domain name and origin domain cannot be the same. When a user accesses the acceleration domain name for a website resource but it is not cached, CDN will need to pull the resource from the origin server. If the origin domain is the same as the acceleration domain name, the user's request will be repeatedly directed to CDN PoPs, and CDN PoPs will not be able to pull content from the origin server.

2.25 Do Acceleration Domain Name and Origin Domain Both Need to Be Licensed by China's MIIT?

- An acceleration domain name whose service area is **Chinese mainland** or **Global** must be licensed by the MIIT.

- An acceleration domain name whose service area is **Outside Chinese mainland** does not need to be licensed by the MIIT.

- The origin domain does not need to be licensed, but should be accessible over the Internet. (It is recommended that the origin domain be licensed by the MIIT as well.)

    📖 **NOTE**

    If your domain name has an ICP license number, then you can directly use CDN.

If a Domain Name Is Not Registered on the Chinese Mainland but Its CDN Service Area Is the Chinese Mainland, Is an ICP License Required for It?

Yes. Whether a domain name needs to be licensed does not depend on the region of the domain name provider or the area where the website server is. All that matters is the service area of your domain name. If the service area includes the

Chinese mainland, the domain name must be licensed by the MIIT before being added as an acceleration domain name.

Can a Level-2 Domain Be Connected to CDN If It Is Resolved Outside the Chinese Mainland and Only Its Level-1 Domain Name Has Been Licensed?

Yes. If the level-1 domain name has been licensed by the MIIT, the level-2 domain name does not need to be licensed. Domain names whose service area is outside the Chinese mainland do not need to be licensed.

2.26 Can CDN Provide Acceleration for a Domain Name That Houses Different Types of Services (Website, VOD, and File Download)?

Yes, but the acceleration will not be noticeable. It is recommended that different types of pages use different domain names for acceleration.

For example, place the VOD content in http://video.example.com and video content in http://file.example.com, and then apply CDN separately to the two different domains.

2.27 Why Is the Error Message Indicating Failed to Obtain the Domain ID Displayed When an IAM User Calls an API After the Enterprise Project Function Is Enabled?

The account administrator grants only the permissions of an enterprise project to the IAM user, so the IAM user cannot obtain the domain ID of the account, and the following error message is displayed when the IAM user calls an API.

Or

In this case, log in to the console as the account administrator and obtain the domain ID of the account. Carry the parameter **domainId** when calling an API as the IAM user.

```
if __name__ == "__main__":
    ak = "<YOUR AK>"
    sk = "<YOUR SK>"
    endpoint = "https://cdn.myhuaweicloud.com"
    domainId = ""

    credentials = GlobalCredentials(ak, sk, domainId) \
```

2.28 Can CDN Share an Acceleration Domain Name with Live?

No. Live and CDN share PoPs. If your domain name has been added to Live, use another domain name for CDN acceleration.

3 Purchase and Billing

3.1 What Will I Billed For?

You will be billed for:

- Traffic generated by user access to CDN PoPs. CDN does not charge any origin pull requests.

- Traffic for obtaining content from the origin server that is an object storage bucket.

Billing on the CDN side:

- You can choose to be billed by traffic, peak bandwidth, 95th percentile bandwidth, or average daily peak bandwidth. You can also purchase economical traffic packages. For details, see **Billing**.

Billing on the OBS side:

- OBS provides origin pull packages for CDN. You can buy a package to pay for traffic incurred for pulling content from an OBS bucket.

  ☐ **NOTE**

    Ensure that the purchased origin pull package and your OBS bucket are in the same region. If they are in different regions, you need to purchase a new origin pull package in the region where the bucket locates.

Cache prefetch:

- Cache prefetch is simulation of origin pull. Traffic or bandwidth consumed during cache prefetch is not billed by CDN, but billed by other services based on your origin server configuration. For example, if your origin server is an OBS bucket, you will be billed by OBS for traffic generated during origin pull.

CDN services will be suspended if you have outstanding unpaid balance. Pay off the outstanding amount in a timely manner to ensure that your services are not interrupted.

3.2 Will I Be Billed If My Domain Name Is Under Attack?

Yes. The consumed traffic or bandwidth will be billed.

If a domain name is under attack and the attacks affect other CDN users or pose risks to CDN, CDN will ban the domain name, change its status to **Disabled**, and disable the acceleration service for it. The domain name cannot be accessed but its configuration is retained. When the attack stops, contact customer service to unban the domain name.

- Solutions

Solution	Description
Access control	You can use access control functions such as referer validation, IP address access control lists (ACLs), and token authentication for domain names to avoid unnecessary traffic or bandwidth consumption. For details, see **Access Control**.
Association between CDN and Cloud Eye	You can view basic data (such as traffic, bandwidth, and status codes) of domain names under your account in real time and set alarms. When the monitoring metrics trigger the alarm conditions, alarms are sent by email or SMS, helping you detect potential risks in a timely manner. For details, see **Cloud Eye Monitoring**.
Usage cap	When the **usage cap** is enabled, CDN will disable the acceleration service for your domain names when the access bandwidth reaches the threshold you specify to avoid excessive fee.
Request rate limiting	If **request rate limiting** is enabled, when a single request reaches the rate limit condition, the access speed of the user is limited to reduce the risk of burst bandwidth.

☐ NOTE

To ensure data integrity and accuracy of bills, a bill is usually generated after a billing cycle ends. Therefore, the bill time is later than the time when resources are consumed, and resource consumption cannot be reflected in real time through bills. This is due to the distributed architecture of CDN PoPs. This billing method is widely used.

3.3 Issues Related to CDN Traffic Packages

Issue	Cause and Solution
How am I billed if my traffic package is used up?	You will be billed on a pay-per-use basis if your traffic package is used up or expires. Fees will be deducted from your account balance.

Do I have to consider the service area and origin location when buying a traffic package?	1. You do not need to consider the origin location.
	2. A traffic package is service area-specific.
	   • A Chinese mainland traffic package deducts traffic generated in the Chinese mainland.
	   • An international traffic package deducts traffic generated outside the Chinese mainland.

Can I unsubscribe from a traffic package?	No.
How long is the validity period of a traffic package?	A traffic package is valid for one month, six months, or one year.

Can I renew a traffic package?	You can renew a traffic package before it expires or when your resource is in the grace period or retention period. Currently, traffic packages do not support automatic renewal.
	Procedure
	1. Log in to **Huawei Cloud console**. Choose **Service List** > **Content Delivery & Edge Computing** > **Content Delivery Network**.
	   The CDN console is displayed.
	2. On the top menu bar, choose **Billing** > **Renewal**.
	3. On the **Renewals** page, renew the traffic package or buy it again.
	   • Renew it to extend its validity period or restore the quota when it expires. For details, see **Renewal Rules**.
	   • Buy it again and define its validity period. For details, see **Buying Again**.

Can a traffic package be associated with a specific domain name?	No. All domain names under your account share the traffic package. When you choose traffic-based billing and have purchased a traffic package, the traffic consumption of all domain names under your account will be deducted from the traffic package.

Issue	Cause and Solution
How do I purchase a traffic package?	Log in to the **CDN console**. On the right of the **Dashboard** page, click **Buy** (if you have purchased a traffic package before) or **Buy Resource Package** (if no package is available), and buy traffic packages. For details about the prices, see **Pricing Details**.
Can an international traffic package be used for the Chinese mainland?	No. You need to **buy** a Chinese mainland traffic package if the service area of your domain name is Chinese mainland.
When does a traffic package take effect?	You can use a resource package immediately after you purchased it.
Do I need to consider the user location when buying a Chinese mainland traffic package?	No. If you have a Chinese mainland traffic package, you can deduct traffic generated by all PoPs in the Chinese mainland.
Can multiple domain names share the same traffic package?	Yes. All domain names under your account can share a traffic package.
If I purchase only an international traffic package, how will I be billed for traffic generated in the Chinese mainland?	This depends on the service area of your domain name. 1. When the service area is **Global**: - You are billed on a pay-per-use basic (account balance is deducted). That is, CDN charges you based on the traffic used by your users in the Chinese mainland to access CDN PoPs. For details, see **Price Calculator**. - If you purchase only a Chinese mainland traffic package, traffic generated when users outside the Chinese mainland access the domain name are pay-per-use (account balance is deducted). The detailed rules are the same as those described above. 2. When the service area is **Chinese mainland**: - Users request content from PoPs in the Chinese mainland. The generated traffic can only be deducted from Chinese mainland traffic packages. 3. When the service area is **Outside Chinese mainland**: - Traffic generated by user access can only be deducted from international traffic packages.

3.4 Can I View the Billing Information of a Single Domain Name?

No. CDN issues bills by tenant. However, you can view the traffic or bandwidth utilization of domain names under a tenant in **Analytics**. Log in to the CDN console, choose **Analytics** > **Traffic** in the navigation pane, and view details in the **Domain Name Traffic/Bandwidth Utilization** area.

3.5 Does CDN Charge for HTTP/HTTPS Requests?

If you have enabled whole site acceleration, billing items include the traffic or bandwidth and number of requests. For details about the price, see **Billing**.

Price for whole site acceleration = Basic price (by traffic or bandwidth) + Price for user requests to the system (including HTTP and HTTPS requests)

Other acceleration services, such as website acceleration and file download acceleration, only generate basic fees (traffic or bandwidth fees), even when HTTPS certificates are configured.

3.6 What Traffic Is Consumed When CDN Requests Resources from OBS?

If OBS is used as an origin server, the traffic consumed by CDN to request resources from OBS is origin pull traffic, which is billed by OBS. See **Figure 3-1**.

Figure 3-1 Outbound traffic

3.7 How Do I Set an Alert for the Remaining Traffic in a Traffic Package?

Procedure

1. Log in to **Huawei Cloud console** and go to the **Billing Center**.
2. In the navigation pane, choose **Resource Packages**.
3. Click **Usage Alert** in the upper right corner. In the dialog box displayed, enable the **Enable/Disable** switch and set a remaining usage threshold.

4.   Click **OK**.

3.8 How Do I Check the Bills of 95th Percentile Bandwidth?

1.   Log in to the **Billing Center** and choose **Billing** > **Usage Details** in the navigation pane.

2.   Set **Service Type** to **Content Delivery Network (CDN)**, select a time next to **Used**, set **Usage Type** to **95Peak**, and click **Export**. **Figure 3-2** shows the export result.

Figure 3-2 Exported data

Region	Global
Resource ID	7cd33⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛10392
Resource Name	--
Billing Method	Monthly 95th percentile peak bandwidth
Valid Days	30
Billed Bandwidth	0.058898
Calculation Description	In the 95th percentile calculation, bandwidth statistics are collected every 5 minutes, and there are 288 statistical points a day. In descending order, sort all statistical points of every valid day (on which bandwidth is consumed) in the current month. Remove the highest values of 5%. Then calculate the maximum value among the remaining statistical points, and the maximum value is considered the billed bandwidth of the current month.
Time	Usage (Mbps)
2022/9/1 0:00	0.05872
2022/9/1 0:05	0.008492
2022/9/1 0:10	0.009579
2022/9/1 0:15	0.009754
2022/9/1 0:20	0.058219
2022/9/1 0:25	0.009765
2022/9/1 0:30	0.009816
2022/9/1 0:35	0.009816

📖 **NOTE**

- For details about the pay-per-use billing mode and rules of CDN, see **Billing Items**.
- This method applies only to CDN customers with monthly payment.

3.9 Why Is the Traffic Usage in a Traffic Package Different from That Shown in Analytics?

Possible causes:

1.   CDN statistics on the **Analytics** page are 1 hour later than real-time data. However, there is a 4-hour delay before traffic can be billed. Therefore, the bill time is later than the statistical time. As a result, traffic displayed on the **Analytics** page is greater than that deducted from the current traffic package.

For example, if 20 MB of traffic is consumed from 12:00:00 to 13:00:00,

–   a bill is generated at 17:00:00 for this.

–   the 20 MB of traffic is added to the **Analytics** page at 14:00:00.

However, the 20 MB of traffic is billed until 17:00:00. As a result, the data will be inconsistent.

> **NOTE**
>
> If you are billed by traffic on a pay-per-use basis, traffic deducted may also be different from that displayed on the **Analytics** page.

2. The **Analytics** page on the CDN console displays the logged traffic statistics of acceleration domain names. These statistics are obtained from logs at the application level. However, the billable traffic (the actual network traffic) is 7% to 15% higher than the displayed statistics on the **Analytics** page because TCP/IP packet headers and TCP retransmissions also need to be counted in. Therefore, the billable traffic will be typically 10% higher than the statistics displayed on the CDN console. As a result, the used traffic in the traffic package is higher than that displayed on the **Analytics** page.

3.10 Why Is My Account Balance Deducted Even If I Have Purchased a Traffic Package?

Possible causes:

1. Your CDN services are not billed **by traffic**.
   - Traffic usage is deducted from the traffic package only when your CDN services are billed by traffic.
2. You are using **whole site acceleration**.
   - The whole site acceleration fee contains the basic fee for traffic or peak bandwidth and the fee for HTTP and HTTPS requests generated by whole site acceleration. The latter is deducted from your account balance.
3. The service area of your domain names is **Global**, but you have only purchased a **Chinese mainland** or **International** package.
   - A **Chinese mainland** traffic package can only be used to deduct traffic generated by PoPs in the Chinese mainland. An **International** traffic package can only be used to deduct traffic generated by PoPs outside the Chinese mainland.
4. The used traffic exceeds traffic package quotas.
   - When your usage exceeds quotas of your purchased traffic packages, the system deducts the fee of additional traffic usage from your account balance on a pay-per-use basis.

3.11 Is Billing for On-Demand Service Acceleration the Same as That for File Download Acceleration?

CDN is billed based on the used traffic or bandwidth, regardless of the acceleration service types. For details, see **Billing**.

3.12 What Is a Retention Period?

It is the time Huawei Cloud provides for a customer to renew or repay when the yearly/monthly resources are still not renewed, the pay-per-use resources are still in arrears, or the overdue bills are still not paid off. Within the retention period,

you cannot access or use your cloud service but your data stored in the cloud service is still retained. After a resource enters a retention period, Huawei Cloud will notify you of this by email or text message. If you still do not complete the renewal or payment after the retention period has ended, your data stored in the cloud service will be deleted and the resource will be released.

For details about the retention period, see **Retention Period**.

3.13 If Global Acceleration Is Configured, Are the Traffic and Bandwidth Consumptions in and Outside the Chinese Mainland Billed Separately?

Yes. The traffic and bandwidth consumed in the Chinese mainland are billed based on the prices for the Chinese mainland. The traffic and bandwidth consumed outside the Chinese mainland are billed based on the prices for outside the Chinese mainland. The unit prices are different. For details, see **Billing**.

3.14 Why Is My CDN Not Working When My Account Is in Arrears?

Possible causes:

1. You are billed on a pay-per-use basis for CDN but you have outstanding bills.
2. You are using other Huawei Cloud services, which have incurred outstanding bills.

About Arrears

- If your account is in arrears, a retention period will start. For details about how to handle service suspension due to arrears, see **Service Suspension and Resource Release**.
- During the grace period, the CDN service is not stopped, but domain names cannot be added to CDN.

Solutions

- If you have purchased a traffic package, enable the remaining usage alert by following the instructions in **How Do I Set an Alert for the Remaining Traffic in a Traffic Package?** If the remaining quota of the traffic package drops below a configured threshold, an SMS message or email will be sent to you.

Write-off

- You can view the outstanding amount of your account in the **Billing Center** and offset the outstanding amount.

3.15 An OBS Bucket Is Being Used as the Origin Server and an OBS Pull Traffic Package Has Been Purchased. Why Isn't the Origin Pull Traffic Generated by CDN Being Deducted From the OBS Pull Traffic Package?

Perform the following operations to locate the fault:

- Check whether the purchased pull traffic package and the bucket configured as the origin server are in the same region. If they are not in the same region, origin pull traffic generated by CDN cannot be deducted from the package. In this case, purchase a new pull traffic package.

- Log in to the CDN console and choose **Domains** in the navigation pane. Click the domain name that uses the OBS bucket as its origin server. Ensure that the OBS bucket is set as the origin server in the type of **OBS bucket** rather than **Domain name**. If the type is **Domain name**, the OBS pull traffic packages cannot be used. If the OBS bucket is not set as the origin server in the type of **OBS bucket**, modify the origin server settings.

- Ensure that the OBS bucket version is 3.0 or later. If the bucket version is not 3.0 or later, the pull traffic package cannot be used.

4 Domain Name Settings

4.1 Does CDN Support the Configuration of Domain Names with Ports?

For security purposes, Huawei Cloud CDN adjusts the ports supported for acceleration domain names.

Time When CDN Is Enabled for Your Account	Acceleration Domain Ports
Before August 21, 2024	When adding an acceleration domain name, you cannot customize the ports. All domain names can be accessed through ports such as 80, 443, and 8080. If you have configured special ports for a domain name, you can visit the CDN console and go to the **Ports** area on the **Basic Settings** tab to check them. To disable some ports, submit a service ticket.
August 21, 2024 and later	When adding an acceleration domain name, you cannot customize the ports. The default ports are 80 and 443. To enable other ports, submit a service ticket for consulting. **NOTE** When an end user includes a special port that is not enabled in the backend when accessing an acceleration domain name, the access will fail, and a message indicating that connection setup fails or the status code 403 will be returned.

4.2 Can a Subdomain Name Be Used as an Acceleration Domain Name?

Yes. If the service area of a subdomain name includes the Chinese mainland, the subdomain name must be licensed by the MIIT before you add it as an acceleration domain name.

4.3 Can the CNAME of an Acceleration Domain Name Be Directly Accessed?

No.

After a domain name is added, the system will assign a CNAME (in the form of ***.c.cdnhwc1.com**) to the domain name. Then, you need to configure a CNAME record with your domain provider, mapping the acceleration domain name to the domain name ending with ***.c.cdnhwc1.com**. After the CNAME record takes effect, all requests for your domain name will be sent to CDN PoPs.

4.4 Do I Need to Configure a Certificate for the Origin Server After Adding a Security Certificate to CDN?

The security certificate configured on CDN encrypts transmission when users access CDN PoPs.

- If you want to encrypt transmission from CDN to your origin server, configure a security certificate on the origin server for full-link HTTPS.
- If your services do not have high security requirements, your origin server does not require a certificate, and CDN PoPs will use HTTP to pull content.

Configure a security certificate based on your service requirements.

4.5 Can a Rejected Domain Name Be Modified and Added Again to CDN?

No. The rejection of a domain name usually means that this domain name has not been licensed by China's MIIT. CDN does not support unlicensed domain names. In this case, apply for a license from the MIIT and **review the domain name** on the CDN console.

4.6 Can Multiple Acceleration Domain Names Use the Same Origin Server IP Address?

Yes.

Different acceleration domain names can use the same origin server IP address.

1. When adding acceleration domain names to CDN, enter up to 10 domain names under **Domain Names**.
2. Enter the same origin server address.

4.7 Can the OBS Bucket's Domain Name Be Used as an Acceleration Domain Name If an OBS Bucket Is Configured as an Origin Server?

No. CDN visits the bucket domain name when it pulls content from the bucket. You need to prepare an acceleration domain name different from the origin domain name.

4.8 What Requirements Should I Meet Before Adding a Domain Name Whose Service Area Is Chinese Mainland?

- Your HUAWEI ID has completed real-name authentication.
- Your domain name has been licensed and the ICP license is still valid.
- Content stored in your origin server has been reviewed and approved.

For details about how to quickly access CDN, see **Overview**.

4.9 Can I Limit Access to Domain Names Based on QPS?

No.

You are advised to check access logs for any suspicious access. If you find suspicious accesses from any IP addresses, configure an IP address blacklist to block them.

4.10 Does Huawei Cloud CDN Accelerate Delivery of Content Redirected from VPN?

No.

4.11 Does My Domain Name Have to Be Resolved on Huawei Cloud?

No.

CDN only accelerates content delivery. No matter where your domain name is resolved, make sure it resolves to the CNAME provided by CDN.

4.12 Can an Acceleration Domain Name Be Used in and Outside the Chinese Mainland?

Yes.

When adding a domain name, set the service area to **Global**.

4.13 Why Do My Domain Requests Still Go to CDN PoPs After My Domain Name Has Been Disabled and Domain Resolution Has Been Changed?

Possible causes:

- Carriers and users have cached the DNS resolution result locally. Before the cache expires, domain requests are still sent to CDN PoP. They will be resolved to the new DNS record only after the cache expires.
- Before the domain name is disabled, a user pings the domain name to obtain the IP addresses of CDN PoPs, and then binds the domain name with the PoP IP addresses in the local **hosts** file. It means that the user specifies a resolution to bypass normal DNS resolution. As a result, requests from the user are sent to CDN PoPs.

Solutions:

- If the problem is caused by local cache, wait until the cache expires.
- If a user binds the domain name with CDN PoPs in the local **hosts** file, the user needs to unbind them.

4.14 How Do I Configure a Certificate for a Wildcard Domain?

When you configure a wildcard certificate, the wildcard domain must match the certificate at the same level. For example:

1. If your domain name is a.b.example.com or *.b.example.com, the wildcard certificate must be *.b.example.com rather than *.example.com or *.a.b.example.com.
2. If your domain name is a.example.com or *.example.com, the wildcard certificate must be *.example.com rather than *.b.example.com.

Configuration Method

- To configure a certificate for a single domain name:

  Log in to **Huawei Cloud console** and choose **Service List** > **Content Delivery & Edge Computing** > **Content Delivery Network**. In the navigation pane of the CDN console, choose **Domains**. Click **Configure** in the row containing the target domain name, click the **HTTPS Settings** tab, and configure a certificate.

- To configure a certificate for domain names:

  Log in to **Huawei Cloud console** and choose **Service List** > **Content Delivery & Edge Computing** > **Content Delivery Network**. In the navigation pane of the CDN console, choose **Certificates**. On the **Certificates** page, click **Configure Certificate**.

4.15 Why Am I Seeing the "Incomplete certificate chain" Message?

This is maybe because:

- Certificates are installed in the wrong order.

  Sort the certificates with the root certificate at the end. For example, if you have three certificates, A, B, and C; and the root certificate, the order should be: certificate C - certificate B - certificate A - root certificate.

  For details about how to get the certificate chain right, see **HTTPS Certificate Requirements**.

Alternatively, you can use an online certificate chain tool to fix the incomplete certificate chain.

4.16 Why Am I Seeing a Message Indicating that the Certificate Format Is Incorrect?

HTTPS configuration only supports certificates and private keys in the PEM format. Different certificate authorities have different requirements on the upload of the certificate body. For details about the format requirements, see **HTTPS Certificate Requirements**.

If your certificate format is not PEM, use an online third-party tool to convert the certificate before uploading it.

4.17 Are Self-Signed HTTPS Certificates Supported?

No.

You are advised to buy trusted root certificates. For details about HTTPS certificates, see **HTTPS Certificate Requirements**.

4.18 After Force HTTPS Is Enabled, Why Are Parameters Missing in a POST Request When I Call an API Using HTTP?

A 301/302 redirect is a practical way of redirecting requests from HTTP to HTTPS. If a client does not send a request to the new URL, parameters will be missing, causing no response. A browser can receive a response because the browser submits parameters again after receiving a 301/302 status code. Therefore, after

the client receives a 301/302 status code, the client needs to send a request again with target parameters carried.

If you want to open up APIs and enable force HTTPS, you are advised to set the API to **https://**_endpoint_**/**_{url}_ to prevent missing parameters during 301/302 redirect when an API request is sent.

4.19 Can Users Use HTTP to Visit My Domain Name After HTTPS Is Configured?

Yes. They can visit your domain name using HTTP or HTTPS.

4.20 What Should I Do If the ICP License of an Acceleration Domain Name Expires?

You need to apply for a new license from the MIIT.

- If you obtain a new license before the original one expires, your CDN service will not be affected.
- If a license has expired and no new license has been obtained yet, CDN bans the domain name. After the new license is obtained, you can apply to unban the domain name on the CDN console. For details, see **Reviewing a Domain Name**.

5 Cache Settings

5.1 Will the Cache on CDN PoPs Be Updated in Real Time?

Cached content on CDN PoPs is not updated in real time. CDN PoPs only obtain new content from the origin server when the previously cached content expires. To update content cached on CDN PoPs, configure cache rules or submit cache purge or prefetch tasks. For details, see **Cache Rules**.

5.2 Does Huawei Cloud CDN Support Regular Expressions for Cache Policy Setting?

Currently, only asterisks (*) can be matched for specific files.

Directory matching by regular expression is coming soon.

5.3 Does CDN Support Batch Configuration of Cache Policies for Acceleration Domain Names?

No. However, you can adjust cache rules in a batch in either of the following ways:

1. Copy the cache rules of a domain name to target domain names. For details, see **Copying Domain Configurations to Existing Domains**.
2. Call an API. For details, see **API Reference**.

5.4 Does CDN Cache Status Codes 404 and 403?

By default, CDN caches status codes 404, 500, 502, and 504 for 3 seconds and does not cache other 4XX and 5XX status codes. You can configure the time to live (TTL) for status codes on the CDN console. For details, see **Status Code Cache TTL**.

5.5 What Are the Default Cache Rules? Can I Modify the Cache TTL?

Each domain name is configured with one or more default cache rules.

- If the service type is website acceleration, file download acceleration, or on-demand service acceleration, and the origin server address is an origin IP address or origin domain, two default cache rules are available.

    - The default cache TTL for common dynamic files (for example, .php, .jsp, .asp, and .aspx files) is 0. CDN pulls content from the origin server directly when receiving requests for such dynamic files. You can modify and delete this rule.

    - The default cache TTL for all files is 30 days. You can modify but cannot delete this rule.

- If you have selected **OBS bucket** as the origin server type, there will be only one cache rule for all files by default. You can modify but cannot delete this rule.

- If the service type is whole site acceleration, there will be a cache rule for all files by default. In this rule, the cache TTL is 0. You can modify but cannot delete this rule.

If you want to change the cache TTL, choose **Domains** > **Configure** > **Cache Settings** on the CDN console to change it.

5.6 Why Is the Cache Hit Ratio of a Domain Name with Whole Site Acceleration Greater Than 0?

Symptom: The service type of an acceleration domain name is whole site acceleration. The cache TTL of all files is set to **0**, but the cache hit ratio is greater than 0.

Cause: CDN has an aggregation mechanism. When multiple requests to the same file are sent to CDN PoPs at the same time, CDN pulls origin content for only one request. Therefore, the request hit ratio and traffic hit ratio may be greater than 0.

5.7 Does the Path in Cache Settings Refer to a Web Address or File Path on the Server?

It refers to a web address.

5.8 Why Is the CDN Cache Hit Ratio Low?

Possible causes:

- The HTTP header has been incorrectly configured. As a result, the content cannot be cached. Check the Cache-Control settings of your origin server. If **cache-control** is set to **no-cache**, **no-store**, **max-age=0**, or **private** on the

origin server and **Origin Cache Control** is enabled on CDN, CDN cannot cache resources, resulting in a low hit ratio.

- The cache TTL you have configured is too short. In this case, CDN PoPs will not be able to cache data. They will frequently pull the fresh content from the origin server. As a result, the CDN cache hit ratio will be low.

- A large portion of the content on your origin server is dynamic. CDN mainly accelerates delivery of static content (such as CSS, JS, HTML, TXT files, pictures, and video). Dynamic content (such as ASP, JSP, PHP files, APIs, and dynamic interaction requests) is typically pulled from the origin server.

- The cache is being refreshed too frequently. After a cache purge task is submitted, the cached content on CDN PoPs will be forced to expire. If a user accesses a URL after it has been refreshed, CDN pulls content from the origin server, and the hit ratio will decrease.

- If your origin server has a large number of resources and does not support range requests, CDN PoPs will pull complete resources, increasing the pull traffic and affecting the traffic hit ratio.

- The website is not accessed very frequently. Content cached on the CDN PoPs may be deleted due to infrequent access. As a result, the fresh content is pulled when it is accessed, and the CDN cache hit ratio will decrease.

- An exception occurred on your origin server. In this case, troubleshoot your origin server first.

- HEAD requests are sent. By default, CDN does not cache HEAD requests. Even if cache prefetch is performed, HEAD requests are not cached.

5.9 Why Am I Able to Access and Download a File After It Is Deleted from an OBS Bucket?

It is because the file still stays in the cache and the cache is not refreshed. You are advised to submit cache purge requests if content on the origin server is updated. For details, see **Cache Purge**.

5.10 How Do I Cache the Homepage (Root Directory)?

On the CDN console, choose **Domains** > **Configure** > **Cache Settings**. In the **Configure Cache Rule** dialog box, set **Type** to **Homepage** and set the cache rule for the root directory.

5.11 How Do I Check Whether a Cache Is Hit?

1. Open Google Chrome and press **F12**.
2. Choose **Network**.
3. Enter the website to be accessed in the address box and press **Enter**. View the response headers of the URL of a specific resource and perform the following operations:
    - If the **x-hcs-proxy-type** header exists, check its value. The value **1** indicates that the cache is hit, and the value **0** indicates that the cache is not hit.

- If the **x-hcs-proxy-type** header does not exist, check the value of the **X-Cache-Lookup** header. Value **Hit From MemCache**, **Hit From Disktank**, or **Hit From Upstream** indicates that the cache is hit, whereas other values indicate that the cache is not hit.
- If neither the **x-hcs-proxy-type** nor **X-Cache-Lookup** header exists, check the value of the **age** header. Values greater than 0 indicate that the cache is hit, and the value **0** indicates that the cache is not hit.

5.12 Why Is the Latest Content Inaccessible Even When the Cache TTL Is Set to 0?

If the cache TTL is set to 0, CDN pulls the requested content from the origin server. After the cache TTL is reset, the new setting does not take effect immediately. Wait for a few minutes and try again. You can also manually purge the cache to force the cache to expire.

5.13 Does Huawei Cloud CDN Support Caching octet-stream Stream Files?

Yes.

5.14 Why Are Certain Files Not Downloadable Even Though They Have Not Expired (365 Days)?

CDN PoPs regularly evict cached content that has not recently been accessed, regardless of the content's expiration time.

You can prefetch resources so that users can obtain the most recent resources from CDN PoPs upon first access. For details, see **Cache Purge and Prefetch**.

5.15 How Do I Configure Cache for Resources That Do Not Need to Be Cached?

You can set the cache TTL of these resources to **0** in a cache rule.

5.16 Can I Specify a Directory and Filename Extension for Caching?

Yes. For details, see **Cache Settings**.

5.17 When Hotlinking Happens, Will the Previous Cache Still Exist After I Change the Domain Name?

Yes.

5.18 All Resources Are Preheated, and the Cache TTL Is One Year. Why Is the Requested Content Still Being Pulled from the Origin Server?

CDN PoPs regularly evict cached content that has not recently been accessed, regardless of the content's expiration time. When a user requests the evicted content, CDN has to pull it from the origin server.

You can prefetch resources again so that users can obtain the most recent resources from CDN PoPs upon first access. For details, see **Cache Purge and Prefetch**.

5.19 How Do I Synchronize Content Cached on CDN PoPs with That on the Origin Server?

- You can set cache rules. For content that is frequently updated, you can set a cache rule with a short cache TTL. For other content, you can set a cache rule with a long cache TTL to reduce the pressure on the origin server.

- If the configured cache TTL is not reached but new content is released or content is deleted on the origin server, you can manually purge the cache.

  - Log in to **Huawei Cloud console** and choose **Service List** > **Content Delivery & Edge Computing** > **Content Delivery Network**. In the navigation pane, choose **Prefetch & Purge**. On the **Purge** tab, refresh the cache.

  - Call APIs to force the current content to expire and then prefetch new content. For details, see **API Reference**.

    📖 NOTE

    If only one file needs to be updated, use URL purge to refresh the file. If you use directory purge, all files in the directory will be refreshed and it will take a long time.

5.20 Why Does a Cache Rule Not Take Effect?

Possible causes and solutions:

1. You have just completed configuring the cache rule and it takes about 5 minutes for the rule to take effect. Verify cache configuration after the rule takes effect.

2. You have modified the cache rule.

   - Your modifications are effective for new content cached.

   - You can purge to apply modifications to the existing cache.

3. Cache rules have priorities. The cache rule with a higher priority (large value) is matched first. Check the priority of your cache rules.

Example: You have configured a **File type** cache rule for domain name **www.example.com** to cache JPG files for only one day. The priority of the cache rule is set to **2**.

Type	Content	Priority	Maximum Age
Full path	/test/*.jpg	8	3 days
Directory	/test/folder01	6	5 days
File type	.jpg	2	1 days
All files		1	30 days

Result: When a user accesses the **www.example.com/test/cdn.jpg** file, two cache rules, **Full path** and **File type**, can be applied to this file. The priority of the **Full path** rule is **8**, which is higher than that of the **File type** rule. Therefore, the system follows the **Full path** rule **/test/*.jpg** and caches the file for three days.

Method: To make the **File type** rule to take effect, set its priority to a value greater than **8**.

6 Troubleshooting

6.1 Why Am I Seeing a Message Indicating that the Domain Name Already Exists When I Add a Domain Name for CDN Acceleration?

If you have the permission to resolve the domain name, **submit a service ticket**.

6.2 Why Is My Domain Name Inaccessible After HTTPS Secure Acceleration Is Configured?

Possible cause: The origin protocol of the domain name is HTTP and force redirect from HTTP to HTTPS is configured on your origin server, so that the domain name cannot be accessed using HTTP or HTTPS.

In this case, a status code 301 is returned. CDN PoPs access the origin server using HTTP rather than HTTPS until the maximum number of retransmissions has been reached. As a result, the access will fail.

Solution: Go to the CDN console, choose **Domains** in the navigation pane, click **Configure** in the **Operation** column, click the **Origin Settings** tab, and set **Origin Protocol** to **Same as user**.

6.3 Why Is Data Obtained from a CDN PoP Not the Updated Data?

Cached content on CDN PoPs is not updated in real time. They only pull new content from the origin server when the previously cached content expires and then update the cache.

- After updating content on the origin server, you can submit cache purge requests to force the cached content on CDN PoPs to expire. In this way, users can get the latest data when they access the website.

● For details about the cache purge process and requirements, see **Cache Purge**.

6.4 Why Is 304 Returned When a User Accesses a Resource Under My Acceleration Domain Name?

Status code 304 indicates that the resource has not changed since the last time CDN cached it.

When a client requests the resource for the first time, CDN returns the resource in a 200 response to the client. The response includes **ETag** that marks the time when the resource was last modified. When the client requests the resource again, if the **ETag** value is not modified, 304 is returned and the client loads the cached content. If the **ETag** value differs, the modification time is marked and CDN returns the new resource to the client. Details are as follows:

1. When a client accesses **1.jpg** for the first time, CDN returns the image in a 200 response to the client. Response headers include **Last-Modified** (last modification time) and **ETag**.
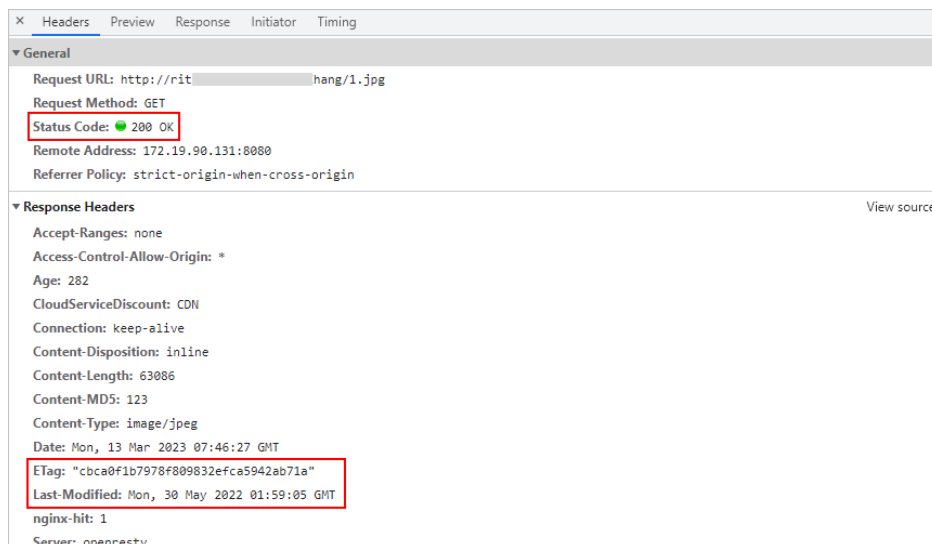
2. When the client accesses **1.jpg** again, the request headers carry the **Last-Modified** and **ETag** values. If the two values differ, CDN returns the latest image in a 200 response to the client. If not modified, the client loads the cached content.
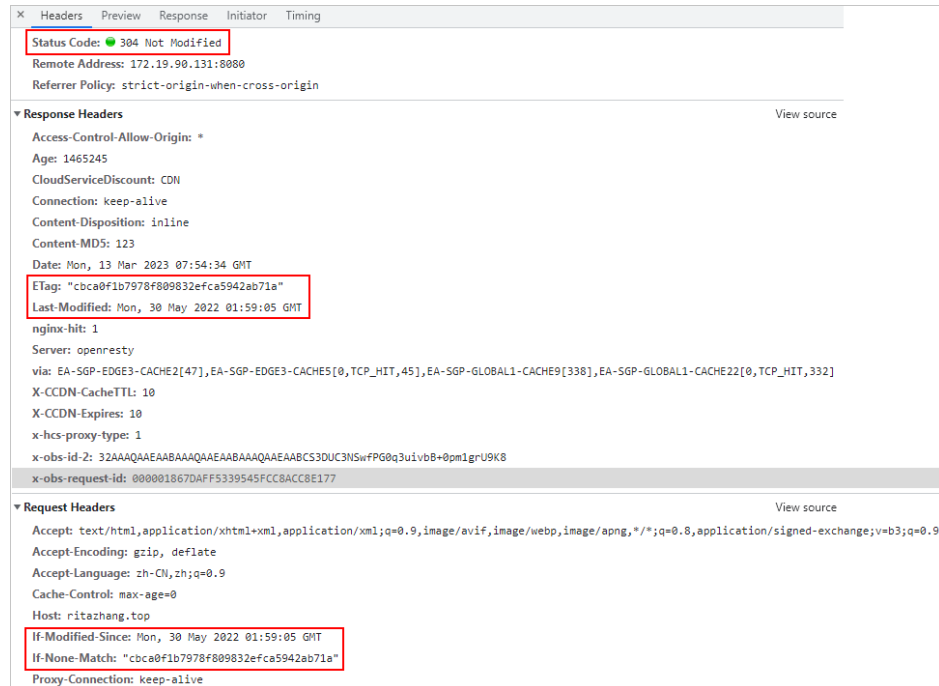
3. The user can press **Ctrl+F5** to clear the client cache. When the user accesses the resource again, status code 200 will be returned.

6.5 Why Does Agency Creation for OBS Fail When an OBS Private Bucket Is Used as the Origin Server?

Possible causes:

1. Your IAM agency quota has been used up.

    On the **Agencies** page of the IAM console, check whether the agency quota has been used up. If yes, delete unnecessary agencies or submit a service ticket to increase the quota.

2. You are an IAM user.

    Check whether the IAM user has the Security Administrator permissions. If not, you cannot create an agency. For details about how to obtain the permissions, see **Assigning Permissions to an IAM User**.

6.6 Why Can't a Web Page Be Properly Displayed After the Origin Server's IP Address Is Changed?

CDN PoPs still cache outdated content. In this case, you need to manually purge the cache. For details, see **Cache Purge and Prefetch**.

6.7 Why Do I Get an Access Failure and Access-Control-Allow-Origin Error?

This issue occurs due to the cross-origin setting.

Solution:

1. Click the target domain name on the **Domains** page.

2. On the **Advanced Settings** tab, click **Edit** next to **HTTP Headers**.

3. Select **Access-Control-Allow-Origin** and set its value to ***** or a specified domain name.

6.8 Why Does Baidu Spider Fail to Capture Data?

The IP address of a CDN PoP frequently changes. The captured IP address may be offline.

6.9 Why Are All Files in the Bucket Displayed When Users Request a File from an OBS Bucket Connected to CDN?

A user that has the read permission on an OBS bucket can read the object list of the bucket. When the user requests the domain name added to CDN, OBS returns the object list by default. You can use any of the following solutions:

1. If you use an OBS public bucket, perform the following steps to rectify the fault:

   a. Enable static website hosting on OBS. For details, see **Configuring Static Website Hosting**.

   b. Select **Static website hosting** on the origin server settings page.

      i. Click the target domain name on the **Domains** page.

      ii. On the **Basic Settings** tab, locate the corresponding OBS bucket origin server in the **Origin Server Settings** area.

      iii. Click **Edit** in the **Operation** column of the origin server and select **Static website hosting**.

      iv. Click **OK**.

         📖 NOTE

         When **Static website hosting** is enabled, the object list of the bucket may still be displayed due to cache on PoPs. In this case, purge the cache of the homepage URL.

         - (Recommended) Set **Type** to **URL** when purging the cache of homepage URL.

         - Setting **Type** to **Directory** will refresh all content in the directory, so CDN will need to pull content from the origin server, increasing the load on the origin server.

2. If you use an OBS private bucket, create a policy for the CDNAccessPrivateOBS agency to deny listing objects in the bucket.

   a. In the navigation pane of the IAM console, choose **Agencies**. In the **Operation** column of CDNAccessPrivateOBS, click **Authorize**.

   b. On the **Authorize Agency** page, click **Create Policy** and set required parameters.

Table 6-1 Parameters

Parameter		Description
Policy Name		Enter a policy name, for example, **deny ListBucket**.
Policy View		Select **Visual editor**.
Policy Content	Effect	Select **Deny**.
	Cloud service	Select **Object Storage Service (OBS)**.
	Actions	Select **obs:bucket:ListBucket**.
	Resources	Select **All**.
	Request condition	-

  c. Click **Next**.

  d. On the **Select Policy/Role** page, select the created policy and click **Next**.

  e. On the **Select Scope** page, click **OK**. The authorization takes effect 15 to 20 minutes later.

  f. After the authorization takes effect, refresh the CDN cache and try again.

6.10 Why Does a Video Freeze After CDN Is Configured?

A possible cause is that the video file is not cached on a PoP, resulting in slow requests.

- You are advised to prefetch the video file before accessing it. After you submit a cache prefetch request, the origin server proactively sends the most current content to a CDN PoP to be cached. If a user requests the content, the CDN PoP immediately returns the cached content. It does not need to pull any new content.

- For details, see **Cache Purge and Prefetch**.

6.11 Why Is My CDN Disabled?

Possible causes:

- Your domain name is banned due to violations of content regulations (sexually-explicit, illegal drug, gambling, or extremist content).

- Your domain name's license has expired.

- Your domain name has been attacked.

Solutions:

1. If your domain name is banned due to ICP license expiration, have it reviewed by referring to **Reviewing a Domain Name** after obtaining a new license.

2. If your domain name is banned due to content regulation violation, CDN can no longer be enabled for the domain name.

3. If your domain name is banned due to an attack, contact customer service to unban the domain name after the attack stops.

6.12 Why Does the System Always Display "301" After HTTPS Is Configured for a Domain Name?

Origin Protocol is set to **HTTP** for the domain name on the CDN console but **Force HTTPS** is enabled on your origin server.

You need to set **Origin Protocol** to **Same as user** under the **Origin Settings** tab of your domain name on the CDN console.

6.13 Why Do I Get Request Timed Out When Trying to Ping an Acceleration Domain Name?

For security purposes, ping operations are not allowed. You can run the **nslookup** command to check whether CDN has taken effect.

6.14 Why Are Incorrect Resources Being Pulled from My Origin Server?

The host may be incorrectly configured. A host is the host specified in HTTP request headers. It is the domain name of the site accessed by CDN during origin pull. For details, see **Host Header**.

📖 **NOTE**

- After a domain name is added, CDN regards it as the host by default. If you do not want CDN to pull content from the acceleration domain name, set the host to specify the location of the requested content.

- If a Huawei Cloud OBS bucket is used as an origin server, the bucket's domain name is used as the host by default and cannot be changed.

- If you set your origin server address as a domain name, and specify the domain name as that of an object storage bucket of Huawei Cloud or another vendor, set the host to the domain name of your object storage bucket. Otherwise, the origin pull fails.

6.15 Why Is My Site Slow the First Time I Access It After CDN Is Configured?

This is normal. The first time you access a site, CDN PoPs have not yet cached the resources. They still need to pull resources from the origin server.

- To prevent such a situation, you can prefetch the cache. .

6.16 Why Is My Acceleration Domain Name Inaccessible Outside the Chinese Mainland?

You may have only enabled CDN for the Chinese mainland.

- If the service area of your domain name is **Chinese mainland**, all client requests are scheduled to PoPs in Chinese mainland. In this case, when users outside the Chinese mainland access the domain name, due to cross-border network conditions, the acceleration will not be as noticeable as it is for access from within the Chinese mainland. In the worst-case scenario, your domain name may become inaccessible.
- To solve this problem, you can add an acceleration domain name whose service area is **Outside Chinese mainland** or **Global** on the console.

6.17 Why Is a File in an OBS Bucket with CDN Acceleration Enabled Automatically Downloaded When I Access the File?

Online preview is not enabled. To enable it, log in to the CDN console, choose **Domains** in the navigation pane, click the target domain name, click the **Advanced Settings** tab, click **Edit** next to **HTTP Headers**, and set **Content-Disposition** to **inline**.

Response Header Operation	Parameter	Value
Set	Content-Disposition	inline

6.18 What Should I Do If a Domain Name Fails to Be Added?

The following table lists the causes and solutions.

Cause	Solution
The acceleration domain name is the same as the origin server domain name.	Change either of the domain name and try again. Otherwise, an infinite loop occurs and CDN cannot pull content from the origin server.
The acceleration domain name has already been added.	Use another domain name as the acceleration domain name.

Cause	Solution
Your account has not completed real-name authentication.	If the service area of your acceleration domain name includes the Chinese mainland, complete real-name authentication and add the domain name again.
The acceleration domain name is restricted.	- If your account is frozen due to domain name violation, submit a service ticket. - If your account is frozen due to outstanding payments, pay off the outstanding amount and add the domain name again.
The origin server is a subdomain name of the acceleration domain name.	The origin server cannot be a subdomain name of a wildcard domain name that has been added to Huawei Cloud CDN for acceleration. Otherwise, origin pull fails. Change the origin server domain name and try again.

6.19 Why Are CDN PoPs Offline During O&M?

Huawei Cloud CDN has over 2,800 PoPs in more than 130 countries and regions. To ensure the normal running of these PoPs, the O&M team of Huawei Cloud CDN irregularly performs O&M, such as software/hardware upgrade, network cutover, and PoP reconstruction. Generally, relevant PoPs are brought offline during O&M. Huawei Cloud CDN will take measures to reduce the O&M impact on users. However, due to the local carrier and client DNS caches, some users may still access offline PoPs, resulting in access failures.

Optimization Measures Taken by Huawei Cloud CDN

Routine PoP O&M is a normal maintenance and upgrade behavior, complying with the service availability commitment in the **Content Delivery Network (CDN) Service Level Agreement**. To minimize the impact on client access, Huawei Cloud CDN provides measures during PoP O&M, including but not limited to the following:

- Very small **number of concurrent PoPs** in O&M
- **O&M time** during off-peak hours in the early morning, rather than peak hours (19:00–23:00)
- **Traffic scheduling** from PoPs in O&M to peripheral normal PoPs before PoPs are brought offline based on the standard PoP O&M process
- **Monitoring of exceptions** (such as carrier line faults and data center faults) that may bring Huawei Cloud CDN PoPs offline unexpectedly. The scheduling system of CDN detects and monitors all PoPs. Once a PoP goes offline abnormally, the scheduling system schedules the traffic from this PoP to peripheral PoPs that are running properly in real time.

Optimization Measures on the User Side

Although Huawei Cloud CDN has taken measures to reduce the impact of O&M operations on clients, some clients still send requests to offline PoPs because both the local carrier and clients have DNS caches. As a result, the access fails. It is recommended that the following measures be taken on the user side to reduce the impact:

- **Clear the local carrier's DNS cache** so that clients can obtain the latest resolution result for subsequent requests, preventing the resolution to offline PoPs.

- **Clear the client cache promptly**. After that, when the client user accesses a PoP, the CDN scheduling system allocates the nearest available PoP.

- **Use the HTTPDNS technology**. You can submit a service ticket to request the HTTPDNS scheduling function. You need to integrate the HTTPDNS technology on clients. Clients can bypass the local DNS of carriers and directly access the scheduling system of Huawei Cloud CDN using HTTPS. Then CDN schedules the optimal PoPs of domain names to be accessed. In this way, the PoP switchover latency caused by the local DNS cache can be avoided.

7 Cache Purge and Prefetch

7.1 What Are the Differences Between Cache Purge and Cache Prefetch?

- Cache purge

  After you submit a cache purge request, cached content on CDN PoPs will be forcibly expired. If a user requests that content, CDN has to pull fresh content from the origin server and then caches that new content.

- Cache prefetch

  After you submit a cache prefetch request, the origin server proactively sends the most current content to a CDN PoP for caching. If a user requests the content, the CDN PoP immediately returns the cached content. It does not pull any new content.

7.2 Why Am I Seeing Insufficient Permission for Cache Purge and Prefetch?

Perform the following operations to rectify the fault:

- If you log in as an IAM user, check whether you have the permissions required to perform cache purge and prefetch. If you do not have the required permissions, apply for them from your account administrator.

- If you have the permissions required to perform cache purge and prefetch, check whether your account is in arrears.

7.3 Why Does a Cache Prefetch Operation Fail?

The following lists the possible causes. You can view the detailed cause on the **Task Progress** tab of the **Prefetch & Purge** page on the CDN console.

1. A large number of files are being prefetched at the same time, and this occupies all of the origin server's bandwidth. Perform prefetch in batches, or increase the bandwidth of the origin server to improve the efficiency.

2. The cache TTL of your requested content is 0. Modify the cache setting.

3. **Cache-Control** is set to **private**, **no-cache**, or **no-store** on the origin server and **Origin Cache Control** is enabled on the CDN console.

4. You requested to prefetch directories or dynamic content.

5. Your origin server cannot be accessed due to network errors, security restrictions such as firewalls and ACLs on the origin server, or other issues.

6. Cross-border prefetch may exist, that is, the origin server location is not in the same area as the prefetch PoP. For example, the origin server is outside the Chinese mainland and the PoP is in the Chinese mainland.

7.4 Does Cache Purge Refresh Content Cached on All PoPs?

Yes. Cache on all PoPs will be purged to ensure that users can access the latest resources.

7.5 Should I Enter an Origin URL or Domain Name URL for Cache Purge and Prefetch?

CDN can purge and prefetch URLs of domain names. Therefore, you need to enter a domain name URL.

7.6 Why Does a Prefetch Task Remain in the Being Processed Status for a Long Time?

Possible causes:

- The task was submitted during a peak hour, so it is still in the queue.
- You are prefetching a large number of files. Prefetch will pull content from the origin server so prefetching a large number of files may consume all of the bandwidth available for your origin server. You are advised to:
  - Prefetch files batches.
  - Prefetch files during off-peak hours, for example, at night.
  - Increase your origin server bandwidth.
- The task has been completed but the status is not refreshed on the console. Refresh the console page and check again.

7.7 How Do I Purge the CDN Cache Where the Domain Name Includes a Wildcard?

When purging the cache for a domain name that includes a wildcard, enter the URLs or directories of the level-2 domain names to be refreshed. Do not enter a URL containing a wildcard, such as **https://*.example.com/file01.html** or **https://*.example.com/file02/**.

Example:

- An acceleration domain name is ***.example.com**.
- The level-2 domain name **abc.example.com** houses the content whose CDN cache is to be refreshed.

    a. Enter the URL to be refreshed: https://abc.example.com/file01.html.

    b. Enter the directory to be refreshed: https://abc.example.com/file02/.

7.8 Why Do Users Still Access the Stale Resource After It Has Been Updated on the Origin Server and Its Cache on CDN Has Been Purged?

Possible causes:

1. You have prefetched resources before purge and the operation interval may be too short. It is recommended that the interval be longer than 5 minutes.

2. Resource update is not complete on the origin server before purge. As a result, CDN cannot pull the updated resource.

3. The URL entered for purge is incorrect, or the directory does not contain the resource. Take domain name **example.com** and image **/test/test1/1.jpg** as an example.

    a. When you set the purge type to **URL**, the entered resource URL should be **http://example.com/test/test1/1.jpg**.

    b. When you set the purge type to **Directory**, the entered resource URL should be **http://example.com/test/**. If you enter **http://example.com/test/test1/**, CDN cannot pull the image.

4. No parameter is contained during purge. If the resource URL contains parameters and you have set a cache rule for this resource to retain all or specific parameters, the parameters must be contained during purge.

7.9 Does CDN Support Directory Prefetch?

No. Only complete URLs can be prefetched.

7.10 Are Cache Purge and Prefetch Mandatory?

This depends on the scenario.

1. After updating a file on the origin server, purge the cache on CDN PoPs. Or, clients may obtain the stale version of the file, or encounter issues such as access failures, repeated redirections, white screens, or disordered page displays.

2. It is recommended that large files, especially video files, be prefetched to improve user experience.

3. Prefetch is not recommended for small files.

7.11 Do I Need to Purge or Prefetch the Cache of Both HTTP and HTTPS URLs?

No. You only need to purge or prefetch the cache of either HTTP or HTTPS URLs.

7.12 If CDN Is Enabled in and Outside the Chinese Mainland, Does It Need to Be Differentiated When Cache Purge and Prefetch?

No. You can directly purge and prefetch the cache of the corresponding URLs.

7.13 Can I Prefetch M3U8 Files?

Yes. When you prefetch M3U8 files, TS files under the M3U8 files are also prefetched.

7.14 Can the Cache Be Automatically Updated After a Static File on the Origin Server Is Updated?

No. You can manually purge the cache in either of the following ways:

1. Log in to **Huawei Cloud console**. Choose **Service List** > **Content Delivery & Edge Computing** > **Content Delivery Network**. In the navigation pane, choose **Prefetch & Purge**. On the **Purge** tab, purge the cache.
2. Call APIs to force the current content to expire and then prefetch new content. For details, see **API Overview**.

7.15 Which Should I Do First, Purge or Prefetch, When I Want to Update Cache?

If your origin server content is updated and you want to update the cache on CDN PoPs:

- Purge the cache first. When cache purge is completed (about 5 minutes), prefetch the cache.
- If you directly perform cache prefetch, content that has been cached on CDN PoPs will not be updated.

If your domain name is added to CDN for the first time and no content is cached on CDN PoPs, you can directly perform cache prefetch to cache the content on PoPs.

8 Security

8.1 What Security Capabilities (Anti-DDoS/CC Attack Defense/Anti-hotlinking) Does CDN Provide?

- By adding your domain name to Huawei Cloud CDN, you can have your origin IP address hidden to prevent the origin server from being exposed to attackers.

- Huawei Cloud CDN has more than 2,800 PoPs on the entire network. CDN relieves the pressure of DDoS/CC attacks on the origin server and prevents the origin server from being paralyzed due to attacks. If CDN PoPs fail to provide services due to heavy attack traffic, CDN will temporarily ban the domain name, change its status to **Disabled**, and disable the acceleration service for it. The domain name cannot be accessed but its configuration is retained.

- CDN supports referer validation, IP address access control lists (ACLs), and token authentication. For details, see **Access Control**.

8.2 Does CDN Support IP Address Filtering?

Yes.

To prevent attacks from specific IP addresses, you can set a blacklist to filter out requests from these addresses. Log in to the CDN console and choose **Domains** > **Access Control** > **IP ACL** to configure the IP address blacklist.

8.3 How Does CDN Respond to CC Attacks?

In a challenge collapsar (CC) attack, the attacker uses a proxy server to generate and send disguised requests to the target host. The attacker keeps sending a large number of data packets to target servers to exhaust server resources and break them down. If a site is attacked, CDN PoPs will bear the attack traffic. Therefore, the origin server will not break down.

- CDN has a preset policy against CC attacks. To disable this policy, submit a service ticket.

- If CDN PoPs fail to provide services due to heavy attack traffic, CDN will temporarily ban the domain name, change its status to **Disabled**, and disable the acceleration service for it. The domain name cannot be accessed but its configuration is retained. When the attack stops, contact customer service to unban the domain name.
- You will be billed for the traffic generated by CDN PoPs during attacks.
- If your acceleration domain name has burst traffic, for example, during new function release, the domain name may be considered to be under attack. Contact technical support in advance to avoid service loss.

8.4 Does CDN Prevent Content Hijacking?

Yes. HTTPS secure acceleration can be used to prevent content hijacking. For details about how to configure HTTPS, see **HTTPS Settings**. However, if domain hijacking occurs before accessing the CDN service, CDN cannot detect it.

8.5 Does CDN Have Anti-DDoS Capabilities?

Yes. CDN's anti-DDoS capabilities depend on the PoP capacity.

- If CDN PoPs fail to provide services due to heavy attack traffic, CDN will temporarily ban the attacked domain name, change its status to **Disabled**, and disable the acceleration service for it.
- The domain name cannot be accessed but its configuration is retained.
- Traffic generated by attacks will be charged.

8.6 Can CDN, WAF, and AAD Be Used Simultaneously?

No.

- CDN can be used with Web Application Firewall (WAF). The traffic flow is: browser > CDN > WAF > origin server. For details, see **Accelerating Delivery of Resources Protected by WAF**.
- CDN cannot be deployed before or after Advanced Anti-DDoS (AAD).

8.7 Can Certificates Be Updated Without Service Interruption?

Yes.

You can choose **Domains** > **Configure** > **HTTPS Settings** on the CDN console to update SSL certificates.

8.8 If a Referer ACL Have Been Configured for an OBS Bucket, Will the Settings Take Effect on the CDN Side?

No.

The settings will not take effect. CDN cannot predict the OBS bucket configuration. Visit **Referer Validation** to learn how to configure it on the CDN side.

8.9 Does CDN Detect Viruses in an Acceleration File?

No.

CDN does not check whether your file content contains viruses. If your file content contains viruses, the carrier and MIIT will notify you so that you can take appropriate measures. If the risk is severe, the carrier and MIIT will disable the URL and then notify you.

8.10 Can Multiple Certificates Be Configured for a Domain Name?

No.

Only one certificate can be configured for a domain name.

8.11 Will the Traffic Pass Through WAF If Both CDN and WAF Are Configured?

There are two situations:

- If the requested content is found in the cache, the traffic does not pass through WAF. CDN directly serves the requested content.
- If the requested content is not found in the cache, the traffic passes through WAF and then reaches the origin server.

For details about how to configure both CDN and WAF, see **Combining CDN and WAF to Get Improved Protection and Load Speed**.

8.12 How Do I Check If CDN Is Being Maliciously Used?

If your site is attacked or has malicious traffic coming, there may be sudden traffic spikes that result in a bill higher than your normal expenditures. This section describes the potential risks and solutions.

- Risks

  Attacks and malicious traffic generate excessive bandwidth usage, and you need to pay significantly more than you usually do.
- Solutions

a. Configure access control (including referer validation, IP address ACL, and token authentication) for domain names to avoid unnecessary traffic or bandwidth consumption. For details, see **Access Control**.

b. Enable **balance alert**. If the available balance in your account is lower than the specified amount, the system will send you an SMS alert.

📖 NOTE

To ensure data integrity and accuracy of bills, a bill is usually generated after a billing cycle ends. Therefore, the bill time is later than the time when resources are consumed, and resource consumption cannot be reflected in real time through bills. This is due to the distributed architecture of CDN PoPs. This billing method is widely used.

9 Statistics and Logs

9.1 What Could Fall Into the "Other" Category in the Visitor Region Statistics?

Other refers to those whose region cannot be identified because their IP addresses are not recorded in the IP address library or their IP addresses cannot be obtained by CDN.

9.2 How Long Is the API Delay of the Top 100 URLs?

Calling the API of top 100 URLs has a delay of about 6 hours. This situation returns to normal at 12:00 on the next day.

9.3 What Are the Meanings of HEAD, HIT, and MISS in CDN Logs?

- **HEAD**

  The HEAD method is similar to the GET method. The only difference is that the server does not return a message body for a HEAD request. In a response to a HEAD request, the metadata contained in the HTTP header is the same as that in a response to a GET request. This method can be used to obtain the metadata about an entity without transferring the entity itself. It is also often used to test the validity, availability, and recent changes of hyperlinks.

- **HIT**

  This indicates a cache hit. A PoP directly serves the content.

- **MISS**

  This indicates a cache miss. A PoP needs to pull content from the origin server.

9.4 What Does User-Agent OkHttp in CDN Logs Mean?

OkHttp is a request protocol used by the Android network framework to process network requests.

9.5 How Many Days of Data Can Be Queried?

- In **Analytics**

  You can query CDN data over the past 90 days. The maximum query time range is 31 days.

- On the **Logs** page

  You can query and download logs over the past 30 days.

9.6 Why Am I Seeing the Message "Fine-grained Authentication Failed" When I Call an API to Download CDN Logs?

It is possible that the enterprise project is not found. You can add **enterprise_project_id=ALL** to the request path.

Example:

```
GET https://cdn.myhuaweicloud.com/v1.0/cdn/logs?
query_date=1502380500000&domain_name=www.example.com&page_size=10&page_number=1&enterprise_project_id=ALL
```

9.7 Why Is There No Data in Analytics?

- The CNAME record configured for your domain name is incorrect.
- CDN statistics in **Analytics** are not available in real time. It is updated about 1 hour later.

10 Origin Pull

10.1 In What Scenarios Does CDN Pull Content from an Origin Server?

1. When the requested content is not cached on CDN PoPs
2. When the cached content on CDN PoPs has expired

10.2 What Do I Fix Origin Pull Failures?

Origin pull failures indicate that CDN PoPs fail to access your origin server or the origin server returns an error. If CDN fails to pull content, CDN will retry once. For details, see **How Does Origin Pull Work If Origin Servers Have Multiple IP Addresses?**.

Check whether the origin server is normal. For details, see **How Do I Check Whether an Access Fault Is Caused by a CDN PoP or Origin Server?**

10.3 Can CDN Pull Content from Third-Party Private Buckets?

Currently, private object storage buckets of third parties cannot be used as origin servers of CDN.

10.4 How Do I Check Whether Range Requests Are Supported for Origin Pull?

Check the response of the origin server. If the response contains the **Content-Range** field, range requests are supported for origin pull.

For example, **Content-Range: bytes 0-100/2600** indicates that bytes from 0 to 100 are requested and the total data size is 2,600 bytes.

The status code of range requests is 206 instead of 200.

10.5 If a Domain Name Is Attacked, Will Access Requests Be Directed to the Origin Server?

If a domain name is under attack and the attacks affect other CDN users or pose risks to CDN, CDN will ban the domain name, change its status to **Disabled**, and disable the acceleration service for it.

10.6 What Are the Benefits of a Standby Origin Server?

If the primary origin server fails, CDN can pull content from the standby one, preventing origin pull failures.

10.7 Does CDN Support Direct Origin Pull Through Crawler Access?

No.

CDN cannot distinguish normal user access from crawler access. If the crawler records the IP address of a PoP, the crawler can directly access that IP address next time. If the PoP is malfunctioning or undergoing routine maintenance, the crawler will be unable to pull content from that IP address.

10.8 What Is the Difference Between a Host and an Origin Server?

The differences are as follows:

- The origin server decides the IP address to be accessed during origin pull.
- The host decides the site that is associated with the requested content.

10.9 How Does Origin Pull Work If Origin Servers Have Multiple IP Addresses?

If the origin servers have multiple IP addresses, the following load balancing mechanism is used for origin pull.

- An origin pull request can be forwarded to up to two IP addresses of the origin server with highest priority. If origin pull from both IP addresses fails, the request is forwarded to an origin server with a lower priority. The request can be forwarded to up to two IP addresses of the second origin server. If origin pull fails again, the request fails.
- Origin pull fails when the connection times out, the connection fails, or a $5xx$ error code is returned from the origin server.

10.10 Why Are Incorrect Resources Being Pulled?

The configuration for host may be incorrect. By default, the host is your acceleration domain name. If your acceleration domain name is not the one that you want CDN to pull content from, change the host to the origin domain. For details, see **Host Header**.

10.11 How Do I View Origin Pull Records?

CDN does not have origin pull logs. You can use the following methods to view origin pull records:

- Check the request logs of your origin server.
- Check whether the CDN logs contain the **MISS** field. If yes, origin pull is performed.

You are advised to prefetch the cache before checking the origin pull traffic.

10.12 Will CDN Download All Files If I Send a Status Code 206 to Request 100-Byte Content?

No.

The status code 206 indicates CDN pulls the requested portion from the origin server.

If you constantly request remaining portions, all files will be fetched from the origin server.

11 Quota

11.1 What Is Quota?

Quotas are enforced for service resources on the platform to prevent unforeseen spikes in resource usage. Quotas limit the number or amount of resources available to users. Table 11-1 describes the restrictions on the number of acceleration domain names, number of URLs for cache purge, number of directories for cache purge, and number of URLs for cache prefetch.

Table 11-1 Quota list

Type	Description	Total Quota
Domain names	Maximum number of acceleration domain names that can be added by an account	100
URLs for cache purge per day	Maximum number of URLs that can be purged by an account each day	2,000
Directories for cache purge per day	Maximum number of directories that can be purged by an account each day	100
URLs for cache prefetch per day	Maximum number of URLs that can be prefetched by an account each day	1,000

If an existing resource quota cannot meet your service requirements, submit a service ticket to increase the quota.

11.2 How Do I View My Quota?

1. Log in to **Huawei Cloud console**. Choose **Service List** > **Content Delivery & Edge Computing** > **Content Delivery Network**.

   The CDN console is displayed.

2. In the upper right corner of the page, choose **Resources** > **My Quotas**.

   The **Quotas** page is displayed.

3. View the used and total quotas of each type of CDN resources.

   If a quota cannot meet your service requirements, click **Increase Quota** to adjust it.