# Enterprise Content Delivery Network

# User Guide

# Product Documentation

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# User Guide
# Domain Name Management
# Domain Name Operations

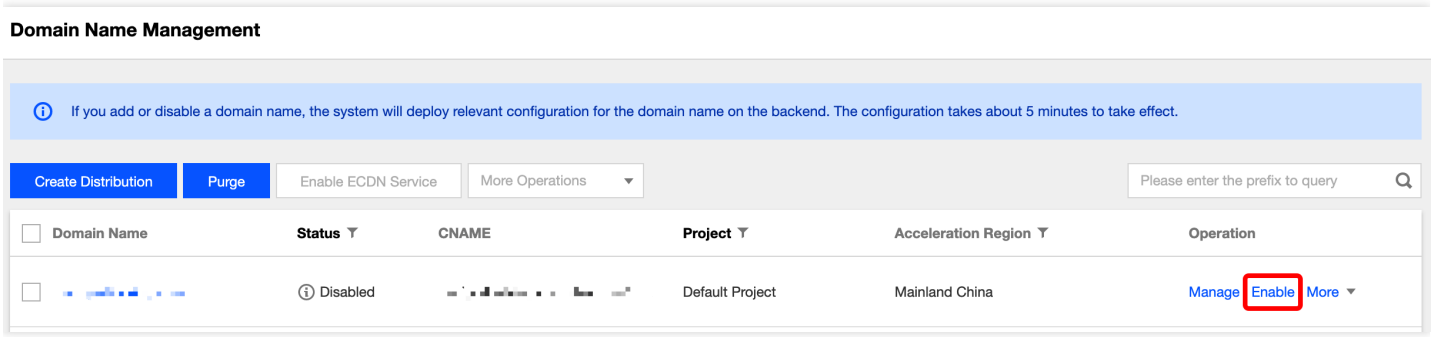
Last updated：2021-08-05 11:29:39

In the ECDN Console, you can enable, disable, and delete the acceleration service or modify the projects for acceleration domain names.

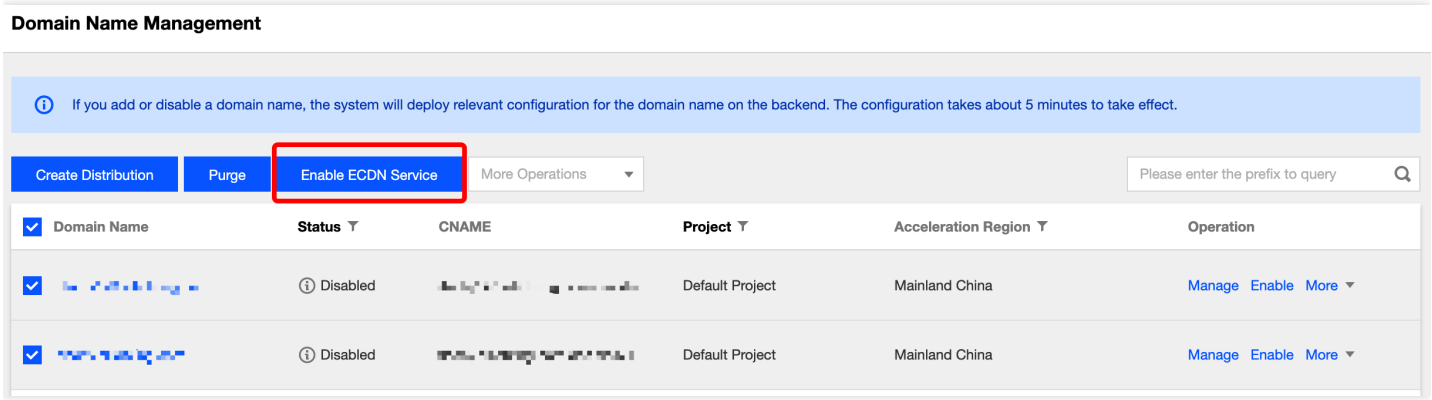
> Note：
> If your application has been migrated to the CDN console, you can go to the console for operation by referring to Content Delivery Network.

## Enabling Acceleration Service

You can **activate** a **deactivated** domain name in the following steps. It takes about 5 minutes to enable the acceleration service.
Log in to the ECDN Console and click **Domain Management** on the left sidebar to enter the **Domain Management** page. In the "Operation" column of the target domain name, click **Activate**.



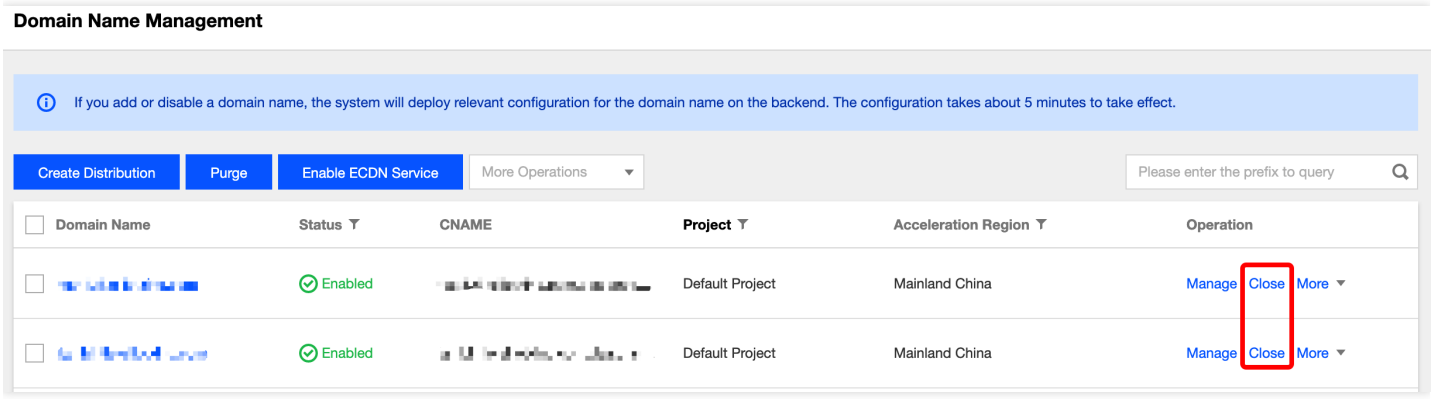

If you want to activate multiple acceleration domain names in batches, you can check them and click **Activate ECDN** above.




# Disabling Acceleration Service

You can **deactivate** an **activated** domain name in the following steps. After the domain name is deactivated, it will no longer be accelerated, but its configuration will be retained. It takes about 5 minutes for domain name deactivation to take effect.

Log in to the ECDN Console and click **Domain Management** on the left sidebar to enter the **Domain Management** page. In the "Operation" column of the target domain name, click **Deactivate**.



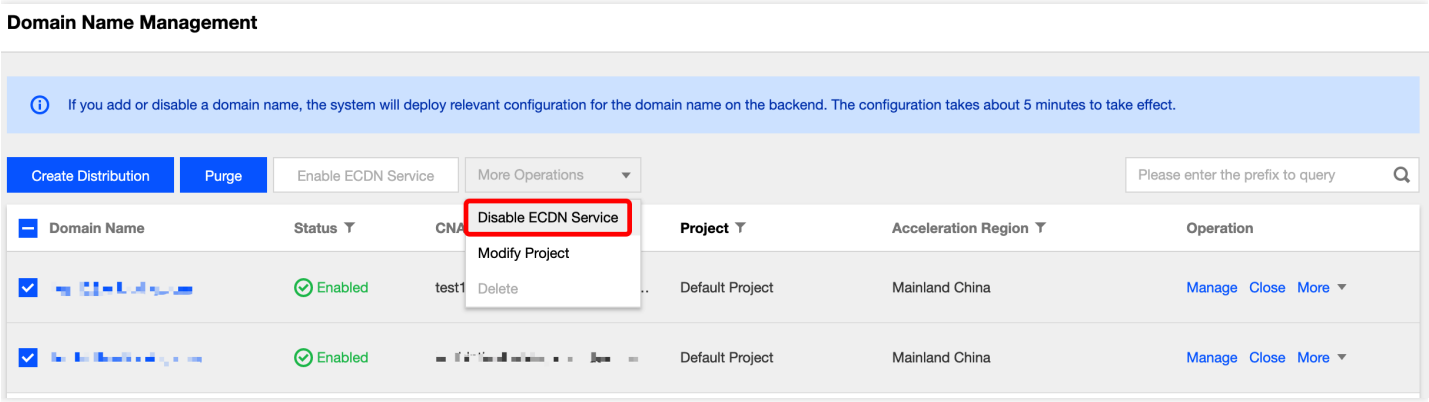

If you want to deactivate multiple acceleration domain names in batches, you can check them and select **Deactivate ECDN** in the **More Actions** drop-down list above.

Note：

Before disabling the acceleration service, make sure that your domain names have been resolved to the origin server, as ECDN nodes will no longer provide acceleration service for them and will directly return the status

code 404 for received user requests after acceleration is disabled. To avoid affecting your user access experience, you are recommended to perform the following steps when disabling the acceleration service:

1. Change the acceleration domain name resolution
   Resolve the acceleration domain name to the origin server and make sure that it will not be resolved to the ECDN domain name through the CNAME record. Change of the domain name resolution generally takes 10–30 minutes to take effect in most regions.
2. Check the traffic change
   After the domain name resolution is switched to the origin server, user requests will no longer be forwarded to the ECDN acceleration platform. In the ECDN Console, you can see that the access traffic of the corresponding domain name will drop significantly. Before disabling the service, please confirm that the ECDN access traffic of the corresponding domain name has decreased to 0; otherwise, directly disabling the service will affect user access.
3. Disable the acceleration service




After confirming that all or most users no longer use ECDN for access, you can deactivate the domain name in the following steps:

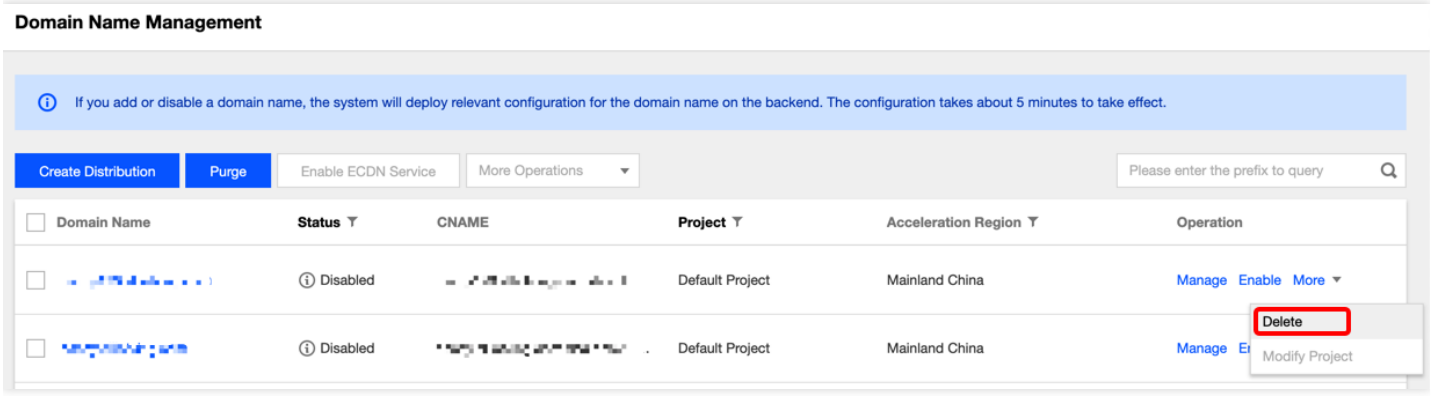
Note：

- Domain name deactivation will affect user access. Please do so with caution.
- After the domain name resolution is switched to the origin server, user requests may still be forwarded to ECDN cache nodes, as local DNS servers of a minority of users do not follow the domain name TTL rule. In this case, those users need to change their local DNS server addresses or set `hosts` resolution.
- Generally, you are recommended to switch the domain name resolution to the origin server first and then disable the domain name acceleration service after 24 hours.

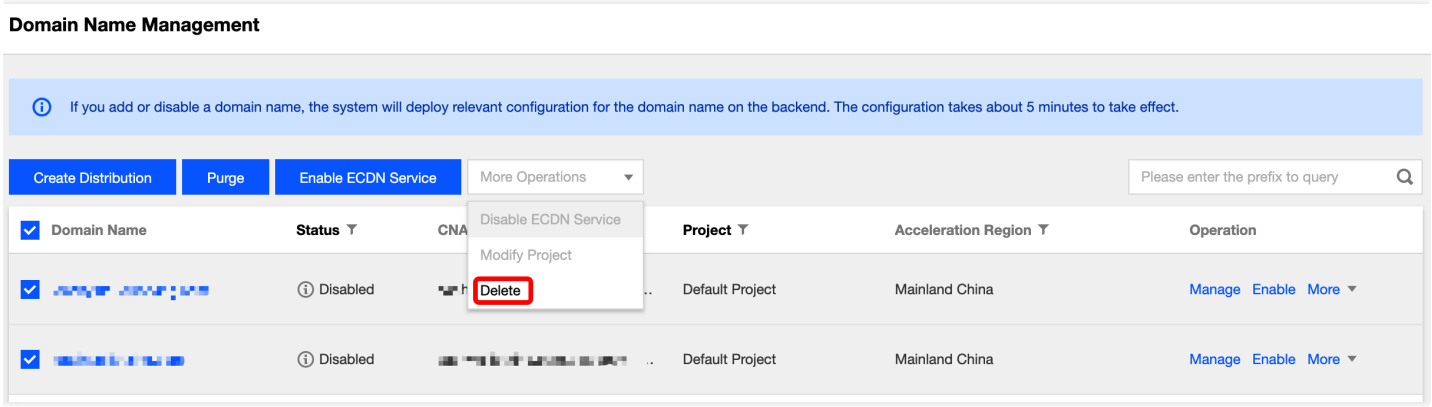
# Deleting Acceleration Domain Name

You can **delete** a **deactivated** domain name. Its configuration will not be retained upon deletion.

Log in to the ECDN Console and click **Domain Management** on the left sidebar to enter the **Domain Management** page. In the "Operation" column of the target domain name, select **Delete** in the **More** drop-down list.




If you want to delete multiple acceleration domain names in batches, you can check the target domain names and select **Delete** in the **More Actions** drop-down list above.

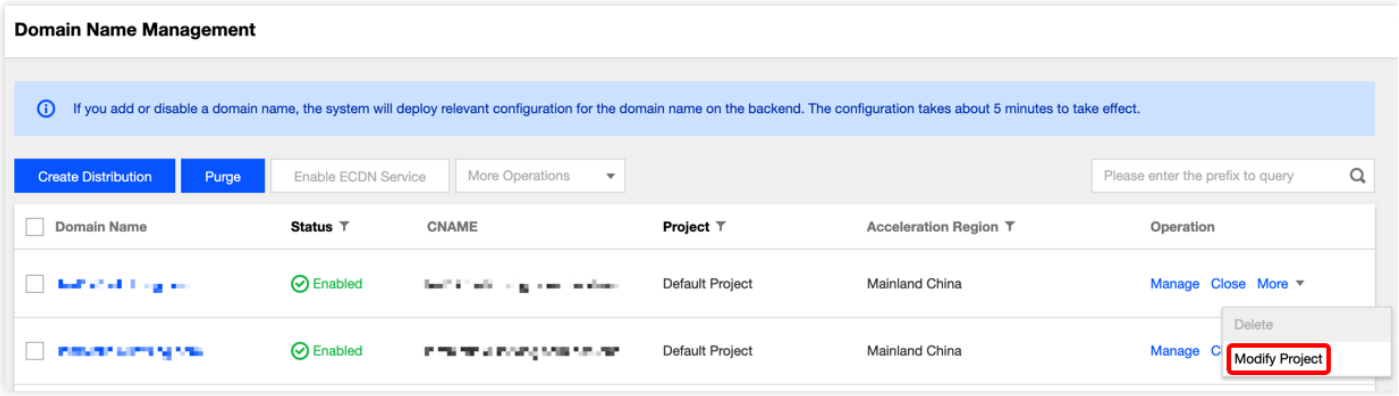



# Modifying Project of Domain Name

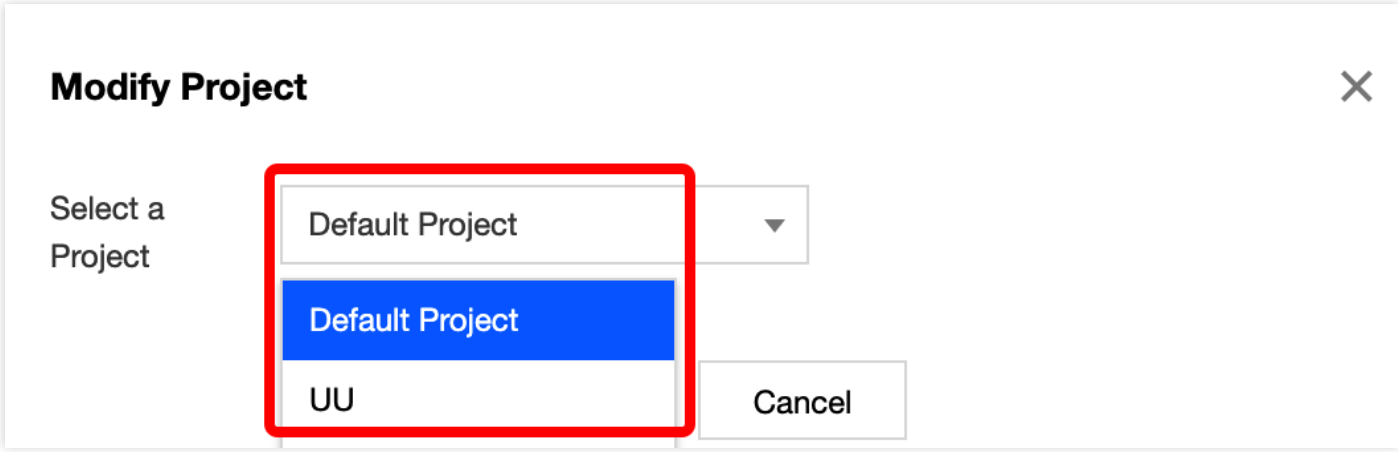
To facilitate management, you can modify the project of your domain name in the following steps.

1. Log in to the ECDN Console and click **Domain Management** on the left sidebar to enter the **Domain Management** page. In the "Operation" column of the target domain name, select **Modify Project** in the **More**

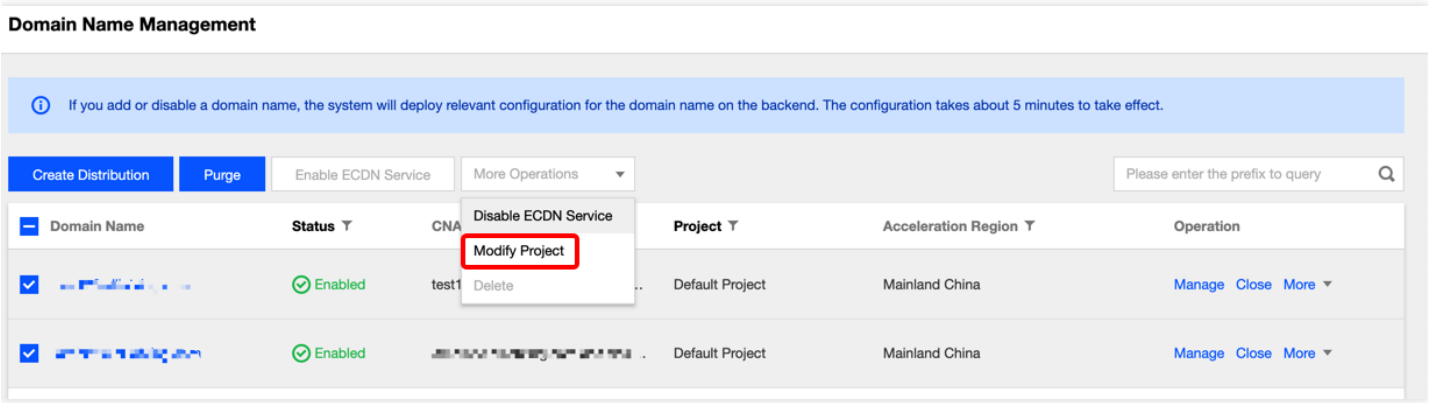
drop-down list.




2. The **Project** drop-down list will be displayed in the pop-up dialog box. You need to select a project for the domain name. Click **OK** to modify the domain name's project.




If you want to modify the project of multiple acceleration domain names in batches, you can check the target domain names and select **Modify Project** in the **More Actions** drop-down list above.



Note：

- You can use the project feature to manage Tencent Cloud resources by project. Tencent Cloud Project Management can be applied to multiple products at the same time.
- You can create and modify projects on the Account Center - Project Management page in the Tencent Cloud Console.

# Configuration Management
# Configuration Overview

Last updated：2020-04-28 14:50:49

This document describes how to configure ECDN. You can set ECDN as needed to optimize the acceleration performance.

## Basic Configuration

| Configuration Name | Document Description |
| --- | --- |
| Getting Started | It describes how to activate the service and quickly connect domain names to the service. |
| Domain Name Connection Configuration | It describes how to connect a domain name to ECDN for acceleration. |
| CNAME Record Configuration | It describes how to configure a CNAME record. |
| Domain Name Status Switch | It describes how to enable, disable, and delete domain name acceleration service. |
| Project Configuration | It describes how to modify a domain name's project and acceleration region. |
| Origin Server Configuration | It describes how to change the origin server type to origin IP or origin domain. |

## Advanced Configuration

| Configuration Name | Document Description |
| --- | --- |
| HTTPS Settings | ECDN supports HTTPS configuration to implement secure acceleration. |
| HTTP Header Configuration | HTTP header configuration can be added, which will affect the browser's response behaviors. |
| Cache Rule Configuration | Static cache policies can be configured for domain names with both dynamic and static content. |
| Alarm Monitoring Configuration | The acceleration service can be monitored and configured with alarms. |

| Configuration Name | Document Description |
| --- | --- |
| Advanced Origin-Pull Configuration | Advanced origin-pull policies based on weight and master/slave architecture are supported. |

# Basic Configuration

Last updated：2021-12-13 17:38:45

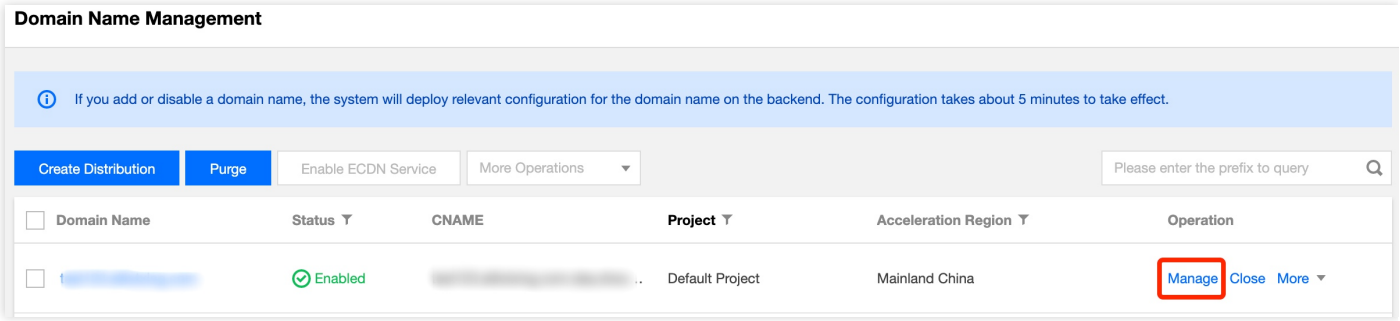
You can view basic information and origin server information of a domain name in the ECDN Console. You can modify **Project**, **Origin Server Type**, and **Origin Server Address** of the domain name as needed.

- Basic information includes the acceleration domain name, CNAME record, project, and creation time of the acceleration service.
- Origin server information includes origin server type and origin server address.

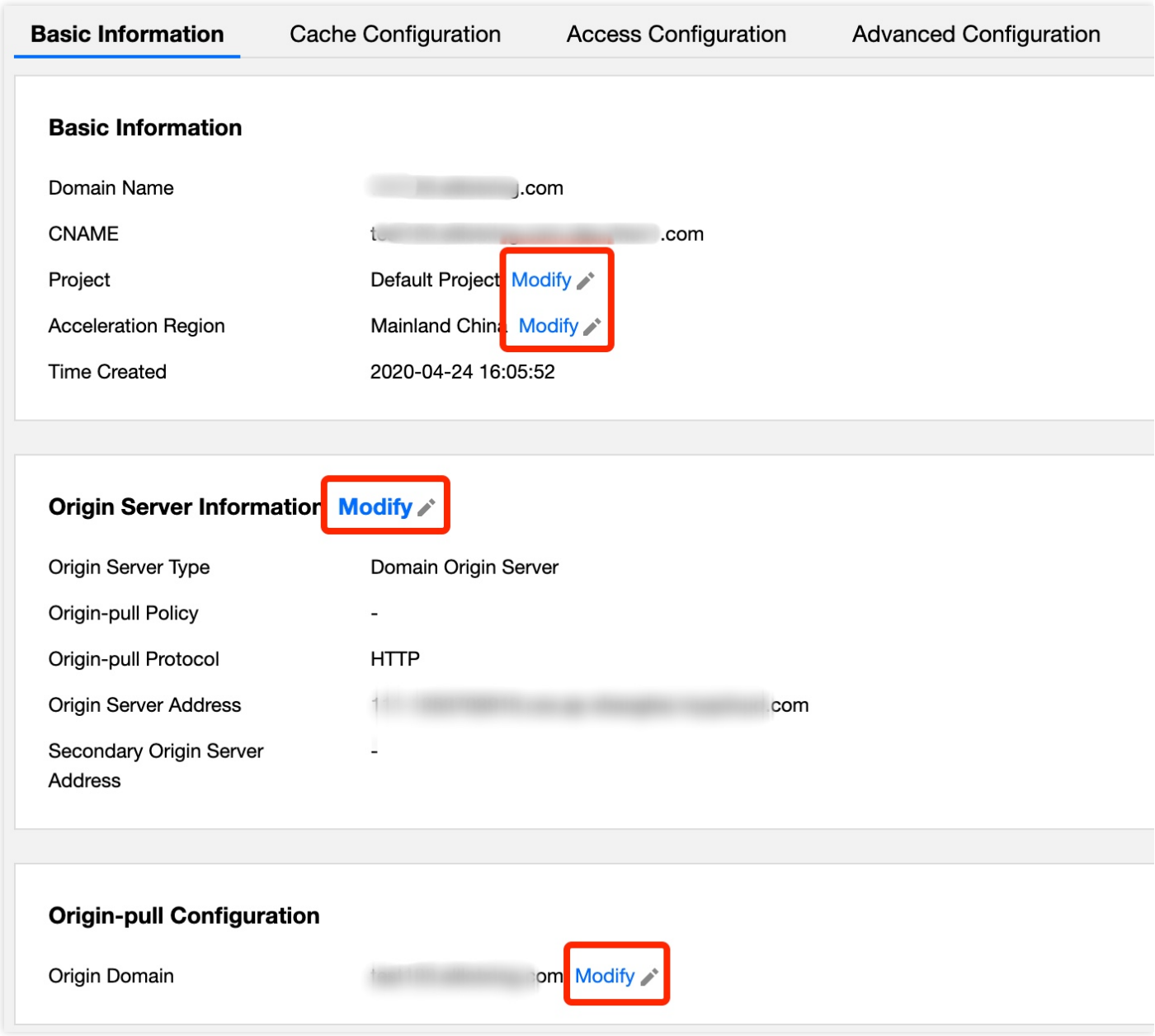
> Note：
> If your application has been migrated to the CDN console, you can go to the console for operation by referring to Content Delivery Network.

## Domain Name Configuration Page

1. Log in to the ECDN Console and click **Domain Management** on the left sidebar to enter the management page.
2. Select **Manage** on the right of the target configuration domain name to enter the domain name configuration page.




3. The **Basic Info** page of the domain name displays its basic configuration information, including the CNAME record, project, acceleration region, origin server information, and origin domain.




# Basic Configuration Project

## Modifying project of domain name

1. Click **Modify** on the right of the project.
2. In the pop-up window, select the target project name, and click **OK**.

## Modifying domain name acceleration region

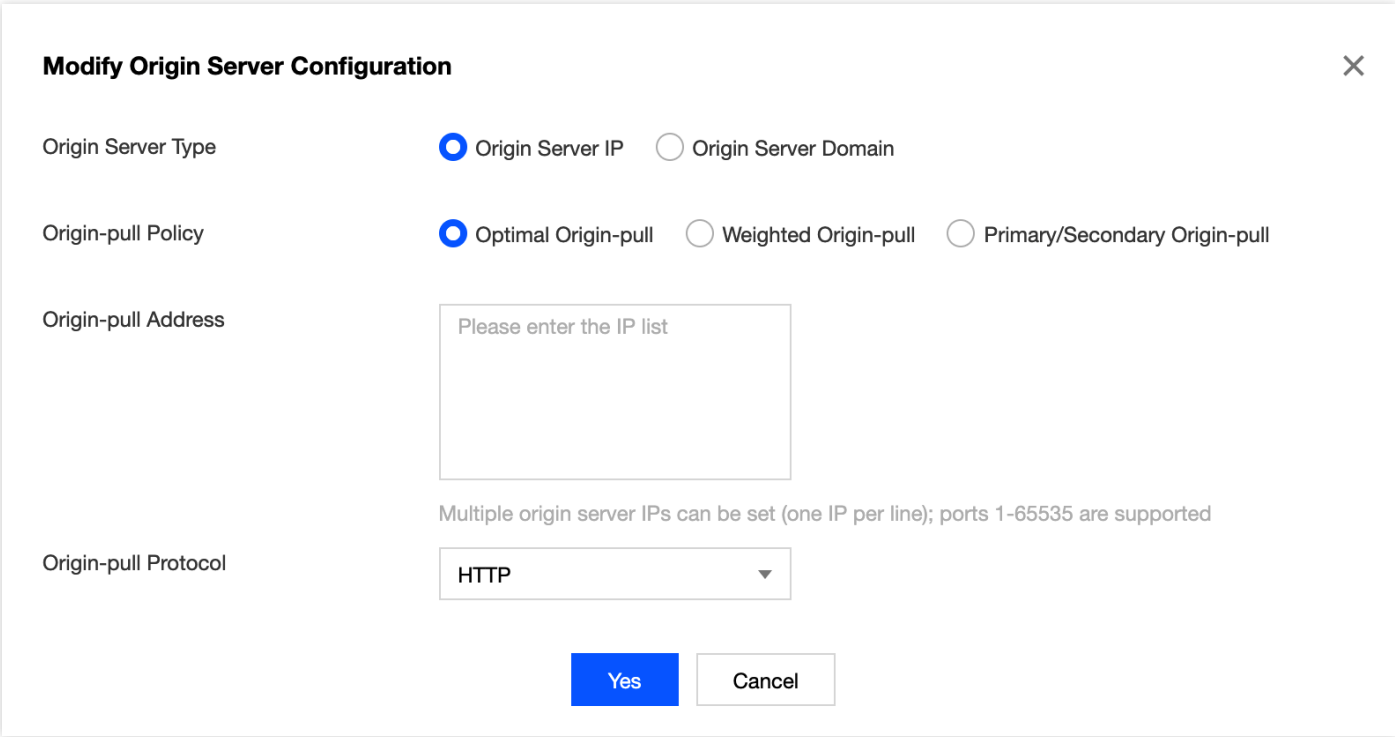
1. Click **Modify** on the right of the acceleration region.

2. Select a domain name acceleration region. Currently, Mainland China, outside Mainland China, or global can be selected.
3. To avoid faulty operations, if you need to delete configuration of an acceleration region, please submit a ticket to apply for modification.

Note：
The acceleration service outside Mainland China is currently in beta test. If your account cannot modify the acceleration region, it indicates that you have not been granted the acceleration permission outside Mainland China. You can submit an application on the ECDN global acceleration eligibility application page, and we will review it in 5 business days and inform you of the result through SMS or internal message.

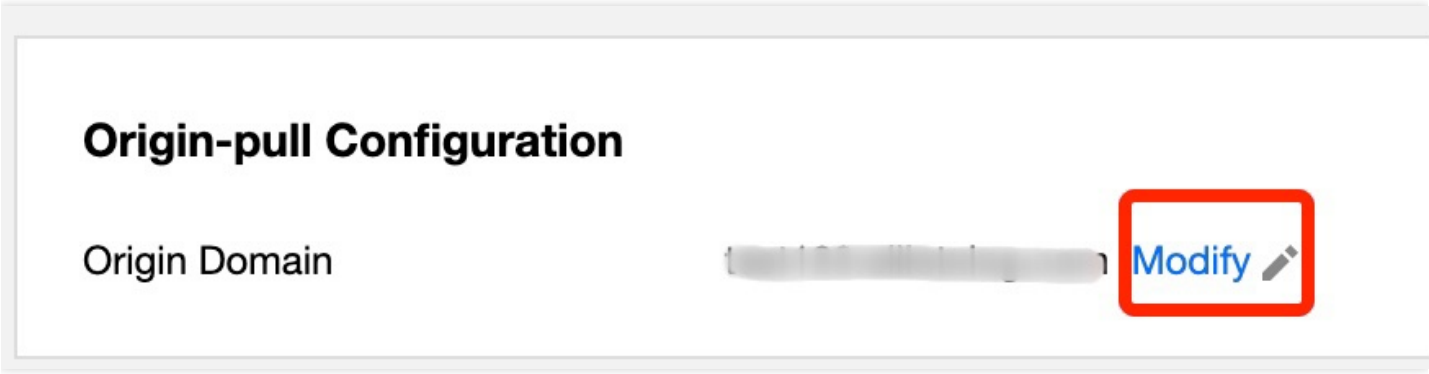
## Modifying origin server configuration

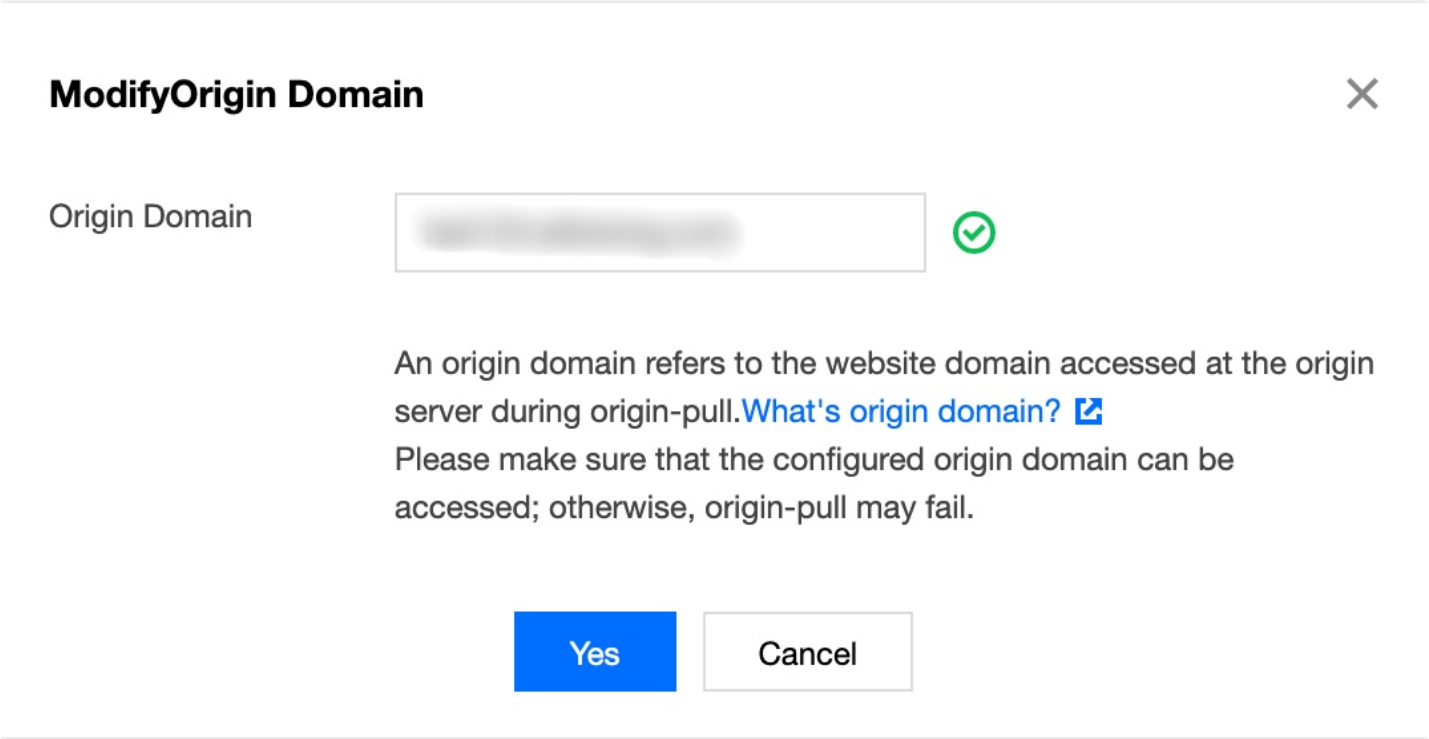
1. Click "Modify" on the right of the origin server configuration to enter the origin server modification page.
2. In the pop-up window, modify your origin server type, origin-pull policy, and origin server address. For more information, please see Advanced Origin-Pull Policies.
3. After the modification is completed, click **OK** to submit the configuration. The system backend will distribute the new origin server modification to the domain name, which will take effect in 3–5 minutes.




## Modifying origin-pull configuration

Click **Edit** next to the origin domain and modify it in the dialog box:



# Cache Configuration

Last updated：2021-08-12 10:18:01

## Features

ECDN can automatically identify static and dynamic content access requests based on the configured rules and intelligently apply an appropriate acceleration scheme, satisfying your needs for accelerating access to sites with static, dynamic or hybrid content at one stop.

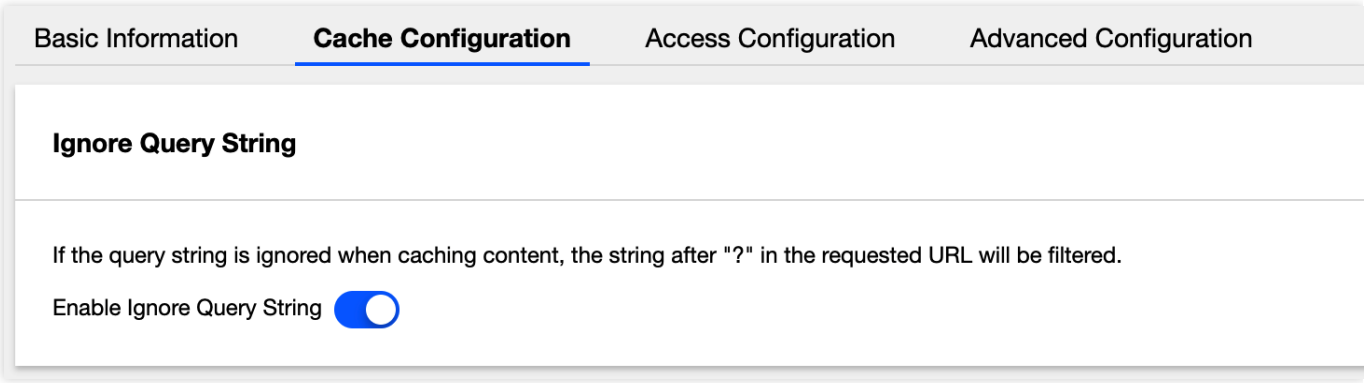
- For static content requests, the edge servers are preferentially used to cache the content for response, improving access efficiency and reducing origin-pull traffic usage.
- For dynamic content requests, resources are directly pulled from the origin servers through high-quality origin-pull and intelligent routing, lowering the average response latency.

> Note：
> If your application has been migrated to the CDN console, you can go to the console for operation by referring to Content Delivery Network.

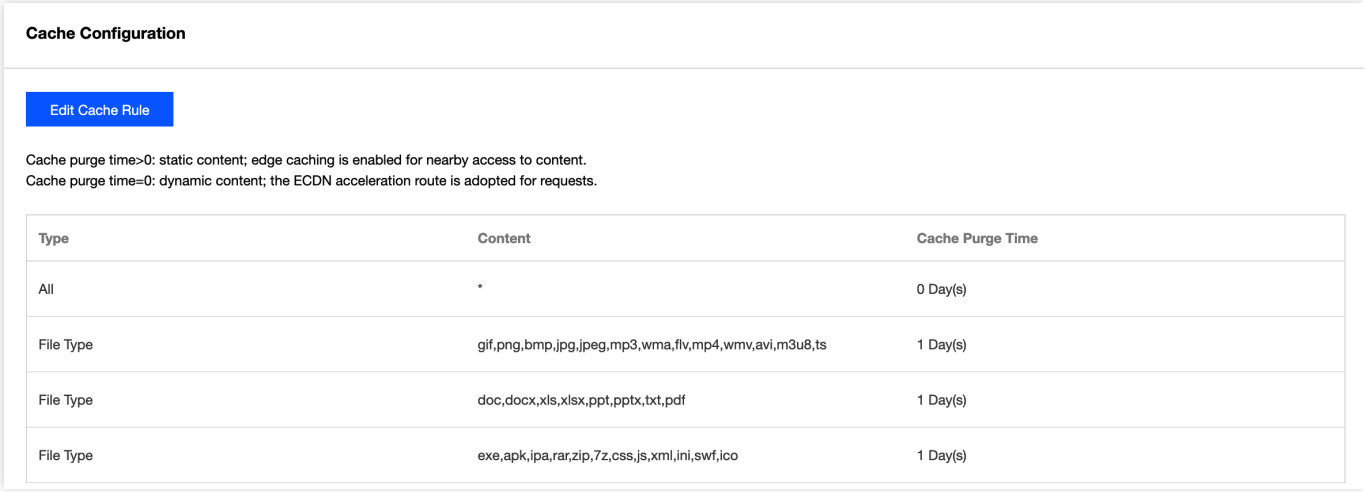
## Directions

1. Log in to the ECDN Console and click **Domain Management** on the left sidebar to enter the management page.
2. In the list, find the domain name to configure and click **Manage** under the "Operation" column on the right to enter the domain management page.
3. On the "Cache Configuration" page, you can configure the content caching rules.
   - Ignore Query String cache configuration:
     You can enable Ignore Query String cache to ignore parameters after "?" in a user request URL during caching. Suppose that content of the URL `http://www.example.com/1.jpg?version=1.1` is cached on nodes. When a user request comes in the cache, the cache_key `www.example.com/1.jpg` will be looked up to

return a direct hit.




- Content cache configuration:
  Click **Edit Cache Rule** to add a caching rule or modify an existing one and click **Save** for the rule to take effect.




## Caching rule types

| Cache Type | Description | Example | Remarks |
| --- | --- | --- | --- |
| File type | Sets the caching time based on file extension | .jpg;.png;.jsp | 1. The content is case-sensitive and must be a file extension starting with `.`.<br>2. Different file extensions should be separated with `;`. |
| Folder | Sets the caching time based on folder | /access;/pic | 1. The content is case-sensitive, and different paths should be separated with `;`.<br>2. It must be a folder starting with `/`.<br>3. It cannot end with `/`. |
| Full-path file | Sets the caching time for a specified file | /a.jpg;/b.png | 1. The content is case-sensitive, and files at different paths should be separated with `;`. |

| | | | |
|---|---|---|---|
| | | | 2. `*` can be used to match a type of files by regex, such as `/test/abc/*.jpg`.<br>3. It must be a folder starting with `/`. |
| Homepage | Sets the caching time for the homepage | / | The homepage content to cache is `/` by default and does not need to be modified. |

## Cache purge time

### Description

- Cache purge time can be set by second, minute, hour, and day (up to 365 days).
- If the cache purge time is 0, requests from the dynamic content will be directly passed through to the origin server, and the response content will not be cached.
- If the cache purge time is greater than 0, requests come from the static content, and the edge caching feature will be enabled:
  - If the content accessed by the user has been cached on the edge server and the cache has not expired, the cached content can be directly accessed without making a request to the origin server.
  - If the content accessed by the user has not been cached on the edge server or the cache has expired, the content will be accessed after making a request to the origin server, and then will be cached on the edge server.

### Suggested setting

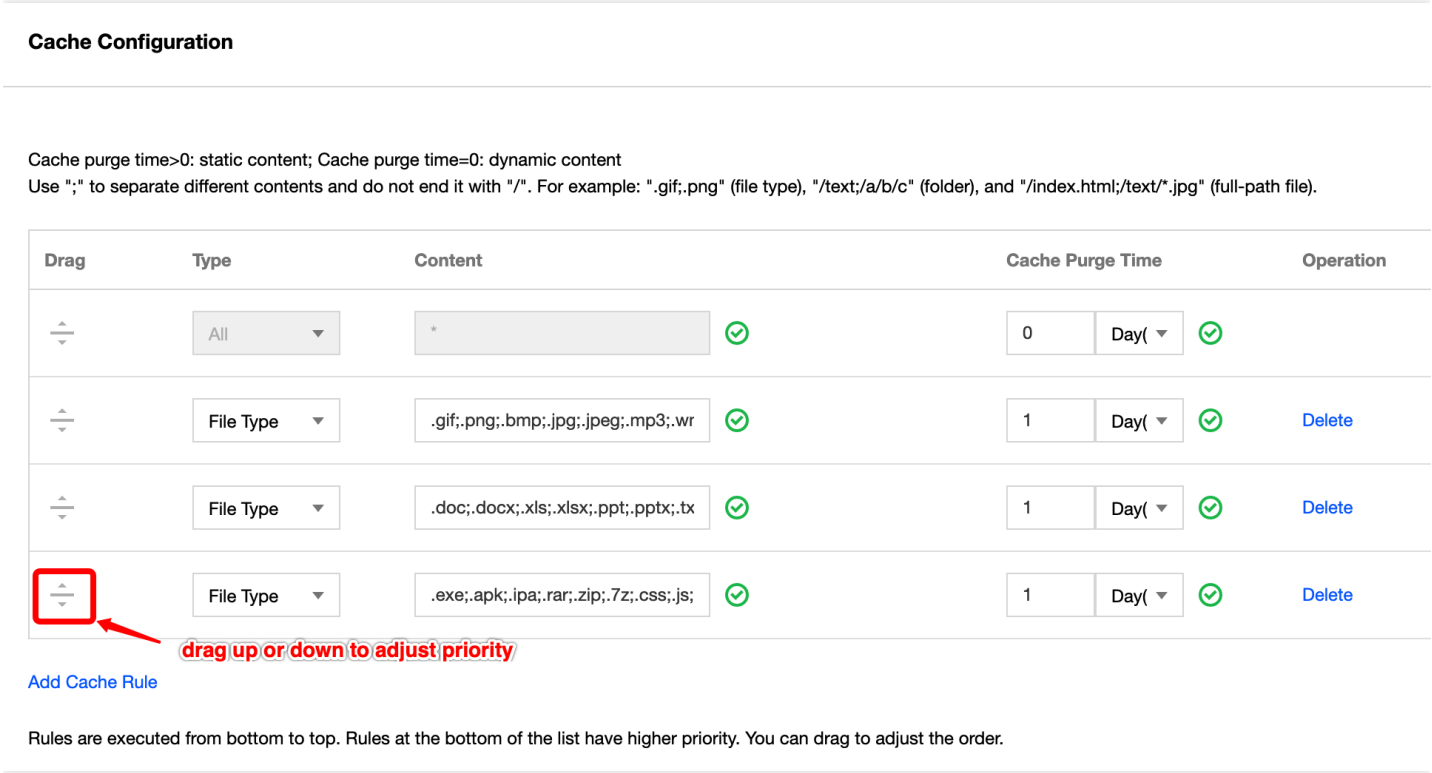
| File Type | Scenario Example | Recommended Caching Time |
|---|---|---|
| Basically unchanged static content | Images and audio/video files | Set the cache purge time to 30 days. |
| Static content that needs updates | Files in formats such as .js and .css | Set the caching time of days or hours based on the update frequency. |
| Dynamic content that is frequently updated and shared by users | Weather queries and region-specific content | Set the caching time of minutes or seconds. |
| Content that is dynamically generated or cannot be accessed repeatedly by the same user | User registration and login APIs | Set the caching time to 0 to disable caching. |

## Caching rule priority

You may get more than one hit result at the same time due to overlaps between caching rules you defined. Given this possibility, the setting of caching rule priority is included.

- Rules at the bottom of the configuration list take priority over those on the top. A new caching rule takes the highest priority.
- A user request will be matched with caching rules by rule priority from high to low. The first hit rule determines the cache purge time of the request.
- You can adjust the priority of rules as needed.

Click **Edit Cache Rule**. You can **drag the icon** to change the rule priority.




# Cache Inheritance

If you configure edge caching for static content, the ECDN system will handle static requests with the caching rules configured. ECDN nodes will not inherit and process the `Cache-Control` field in the response header from the origin server by default, and will not cache the content if this field is `private`, `no-store` or `no-cache`.

# Access Control
# IP Access Limit Configuration

Last updated：2021-08-05 12:05:19

## Configuration Scenario

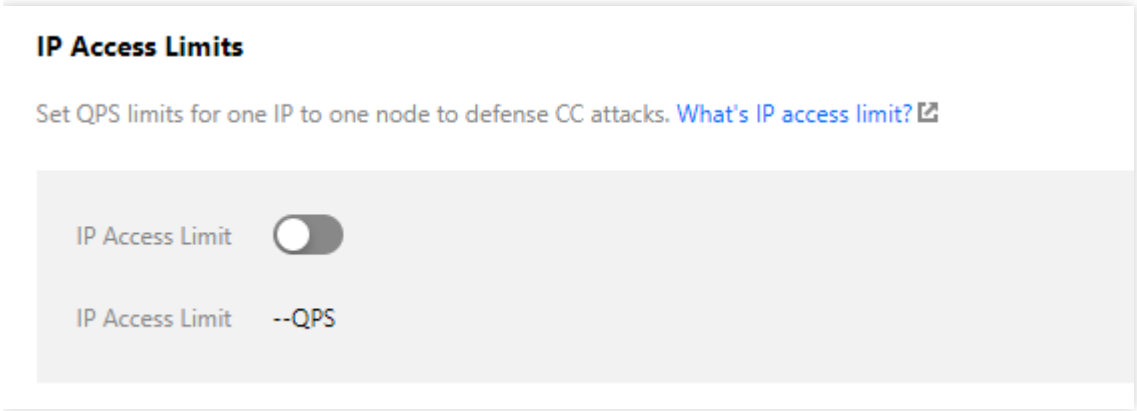
To control the source of access to your business resources, you can use the IP access limit feature in ECDN. By limiting the number of access requests to a node per second from a client IP, you can defend against high-frequency CC attacks and prevent hotlinking by malicious users.

> Note：
> If your application has been migrated to the CDN console, you can go to the console for operation by referring to Content Delivery Network.

## Configuration Guide

### Viewing configuration

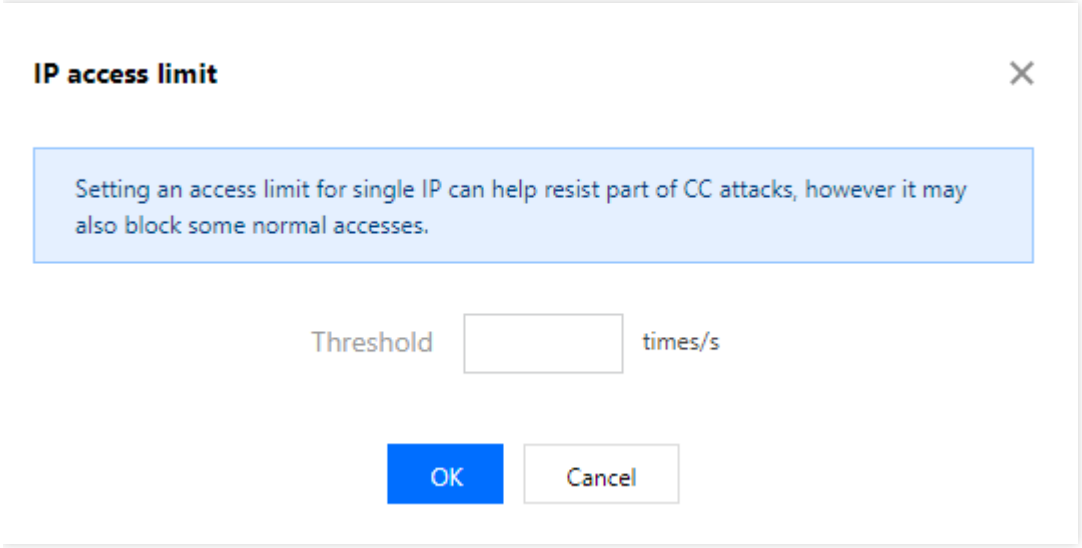
Log in to the ECDN Console, select **Domain Management** on the left sidebar, and click **Manage** on the right of a domain name to enter its configuration page. You will find the IP access frequency limit configuration in **Access Configuration**. It is disabled by default:




### Modifying configuration

#### 1. Modify the configuration

Enter the frequency threshold and click **OK** to enable IP access limit.

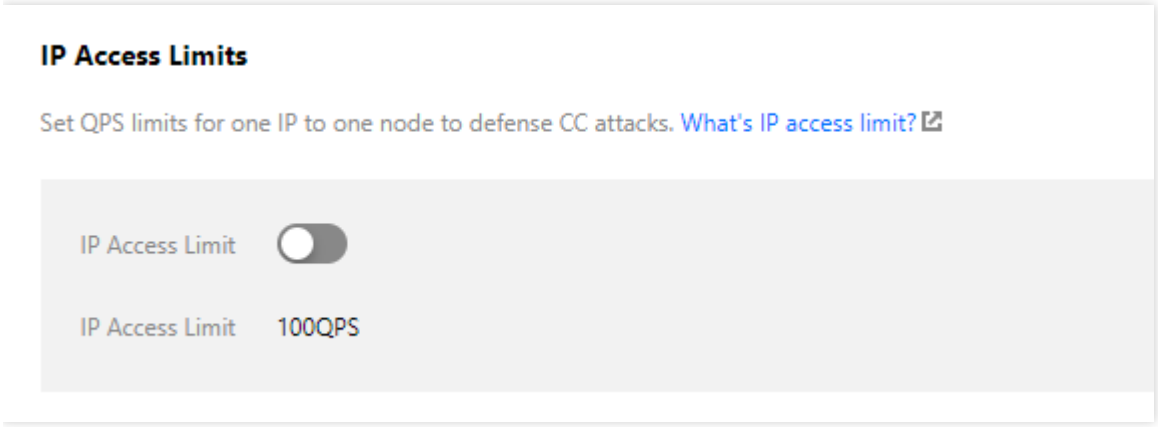



### Configuration description

- After the configuration is enabled, a 514 error will be returned for requests that exceed the QPS limit. A low access frequency limit may impact the normal use of your business by high-frequency users. Configure the proper threshold according to your actual business conditions and use cases.
- IP access limit is effective for attacks from a single IP to a single node. If a malicious user uses a high number of IPs to attack nodes on your entire network, this feature is no longer applicable.

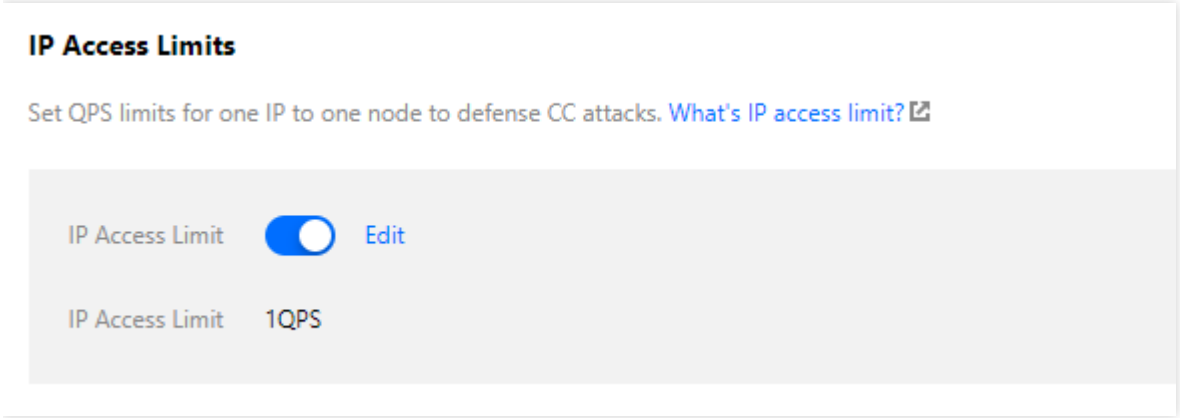
### 2. Disable the configuration

You can switch to disable this feature. When the switch is off, this feature does not take effect in the production environment even if there is an existing configuration. When the switch is on, this configuration will take effect across the entire network:



# Configuration Sample

Suppose the IP access limit for the acceleration domain name `www.test.com` is as follows:




The actual access status will be as follows:

1. If a user with client IP `1.1.1.1` requests the resource `http://www.test.com/1.jpg` for 10 times in one second, and all access requests are made to one server on ECDN cache node A, then 10 access logs will be generated on this server, 9 of which exceed the QPS limit, and the status code "514" will be returned.
2. If a user with client IP `2.2.2.2` requests the resource `http://www.test.com/1.jpg` twice in one second, and the access requests may be distributed to two ECDN cache nodes for processing due to network conditions, then each node will return the content normally.

# IP Blocklist/Allowlist Configuration

Last updated：2021-09-22 14:37:54

## Configuration Scenario

To control the source of access to your business resources, you can use the IP blocklist/allowlist feature in Tencent Cloud ECDN.

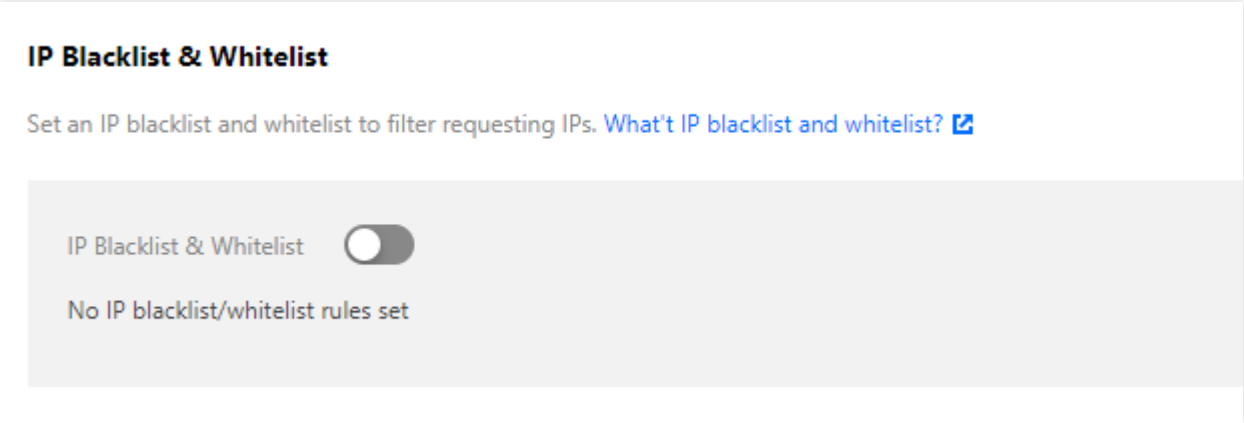
By configuring an access control policy on IPs of user requests, you can effectively control the source of access to prevent hotlinking by malicious IPs, attacks, etc.

> Note：
> If your application has been migrated to the CDN console, you can go to the console for operation by referring to Content Delivery Network.

## Configuration Guide

### Viewing configuration

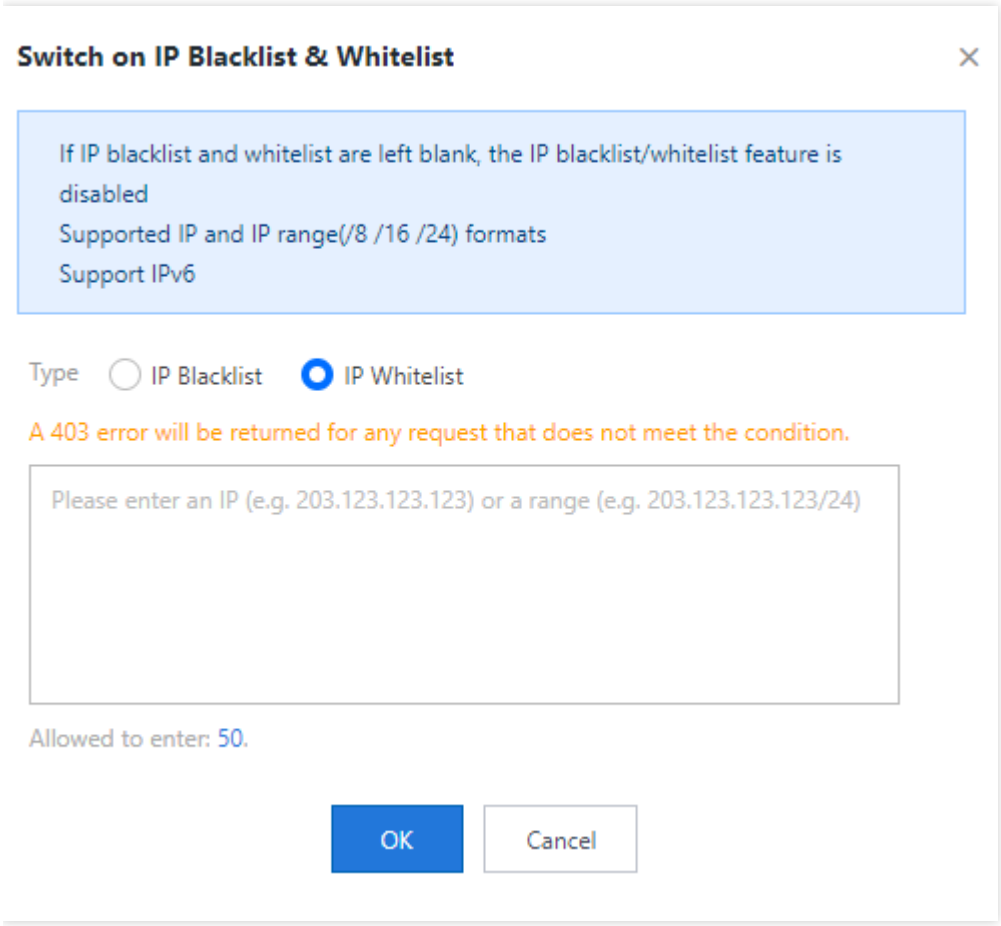
Log in to the ECDN Console, select **Domain Management** on the left sidebar, and click **Manage** on the right of a domain name to enter its configuration page. You will find the IP blocklist/allowlist configuration in **Access Configuration**.




### Modifying configuration

#### 1. Modify the configuration

Click **Edit** to select "IP Blocklist" or "IP Allowlist", enter the list of IPs or IP ranges, and click **OK** to enable IP blocklist/allowlist configuration:




**IP blocklist**

If a client IP matches an IP or IP range in the blocklist, the accessed ECDN node will directly return a 403 status code.

**IP allowlist**

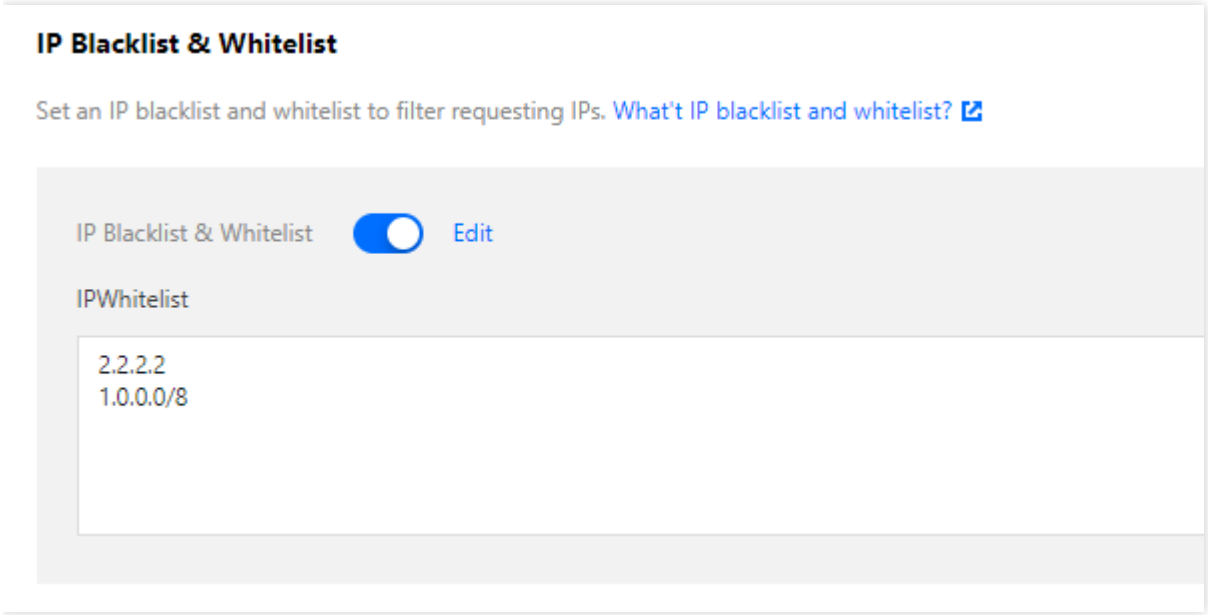
If a client IP does not match any IP or IP range in the allowlist, the accessed ECDN node will directly return a 403 status code.

**Blocklist/Allowlist rules**

- The IP blocklist and allowlist are mutually exclusive and cannot be configured at the same time.
- Only IP ranges `/8` , `/16` , `\24` , and `/32` are supported.
- The blocklist/allowlist does not support entries in `IP:port` format and can contain up to 50 entries.

# Configuration Sample

Suppose the IP blocklist/allowlist of the acceleration domain name `www.test.com` is as follows:




The actual access status will be as follows:

1. When a user with client IP `1.1.1.1` accesses the resource `http://www.test.com/test.txt`, as the IP matches an IP in the allowlist, the requested content will be returned.
2. When a user with client IP `2.1.1.1` accesses the resource `http://www.test.com/test.txt`, as the IP does not match any IP in the allowlist, a 403 status code will be returned.

# Advanced Configuration
# Configure HTTP Header

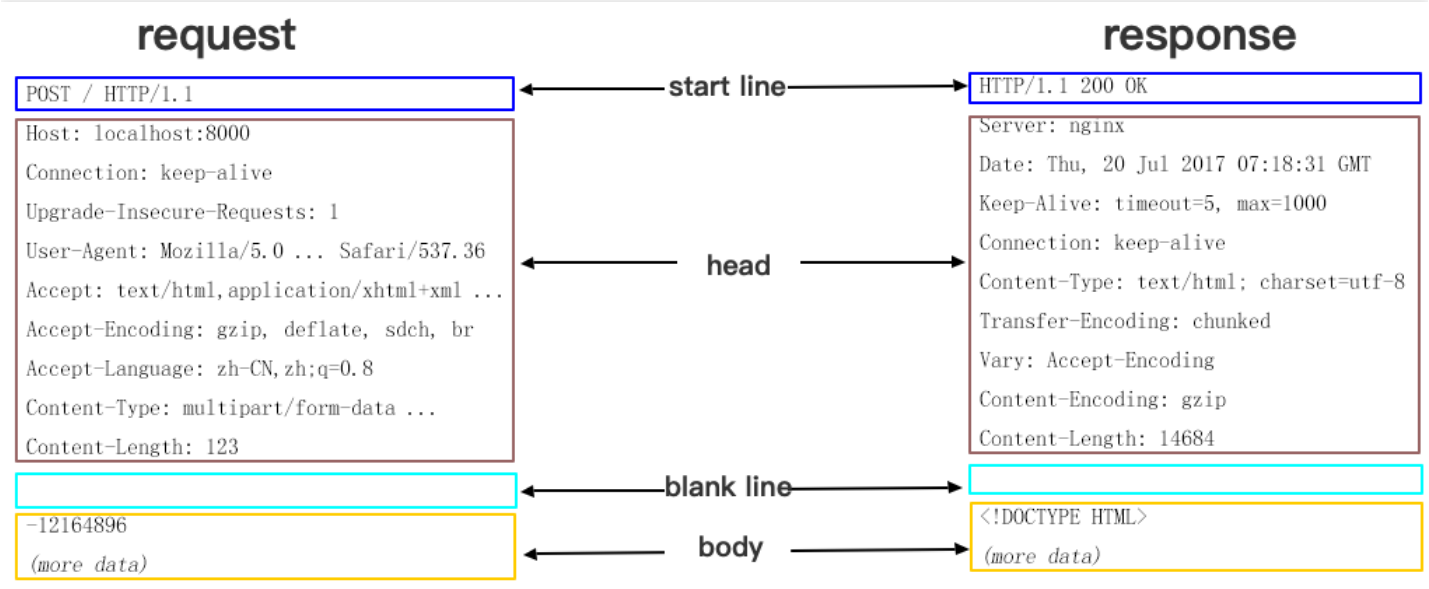
Last updated：2021-08-05 12:21:37

Note：
If your application has been migrated to the CDN console, you can go to the console for operation by referring to Content Delivery Network.

An HTTP message generally contains:

- Request message sent from client to server.
- Response message sent from server to client.

These messages all consist of a beginning line, one or multiple headers, a blank line indicating the end of headers, and an optional message body.




HTTP headers divide into common header, request header, response header, and entity header. Each header consists of a domain name, colon (":"), and domain value, such as `Connection:keep-alive` .
If you use the HTTP header configuration feature provided by ECDN, when an end user requests a business resource, you can add a custom header in the returned **response message** to implement cross-origin access.

Note：

- As the HTTP header configuration is for a specified domain name, once the configuration takes effect, the configured header will be added to the response messages of user requests for any resource under this domain name.
- HTTP header configuration affects only response of the client (such as browser) rather than ECDN node's caching behaviors.

# Configuration Description

ECDN allows you to configure the following headers:

- Content-Disposition: it activates download in the browser and sets the default filename of the downloaded file.
- Content-Language: it specifies the language used in the client (such as browser) response for the resource.
- Access-Control-Allow-Origin: it specifies the sources of cross-origin requests allowed to access the resource.
- Access-Control-Allow-Methods: it specifies the allowed methods of cross-origin requests.
- Access-Control-Max-Age: it specifies the validity period for caching the returned result of preflight request for a particular resource when a cross-origin request is initiated.
- Access-Control-Expose-Headers: it specifies the headers visible to the client when a cross-origin request is initiated.

## General configuration

### Content-Disposition

`Content-Disposition` is used to activate download in the browser and set the default filename of the downloaded resource. When the server sends a file to the client browser, if it is in a type supported by the browser, such as .txt or .jpg, it will be directly opened in the browser by default. If you want to ask the user to save the file, you can configure the `Content-Disposition` field to override the browser's default behavior. The common configuration is `Content-Disposition:attachment;filename=FileName.txt`

### Content-Language

`Content-Language` specifies the code of the language used by the webpage. Common configurations are as follows:

- `Content-Language: zh-CN`
- `Content-Language: en-US`

## Cross-Origin access configuration

Cross-origin access refers to a scenario where a resource under a domain name, such as `www.abc.com`, initiates a request to another resource under another domain name, such as `www.def.com`. As the resource domain names are different, **cross-origin access** will occur. Using different protocols or ports can cause cross-origin access. You need to add configuration related to cross-origin access in the response header to make the first resource get the desired data.

### Access-Control-Allow-Origin

`Access-Control-Allow-Origin` is used to solve the problem of cross-origin permissions of resources. Its value specifies the origins that can access the resource. You can also set the wildcard `\*` to allow all origins to access the resource. Common configurations are as follows:

- `Access-Control-Allow-Origin: *`
- `Access-Control-Allow-Origin: http://www.test.com`

Pay attention to the following limits when configuring `Access-Control-Allow-Origin`:

- Do not use wildcard domain names, e.g., `*.qq.com`.
- Only configure it as `\*` or specify a URI.
- When configuring a specified domain name, add the "http://" or "https://" prefix.

### Access-Control-Allow-Methods

`Access-Control-Allow-Methods` is used to specify the HTTP request methods allowed for cross-origin access. Multiple methods can be set as follows:
`Access-Control-Allow-Methods: POST, GET, OPTIONS`

### Access-Control-Max-Age

`Access-Control-Max-Age` specifies the validity period of a preflight request.
For a non-simple cross-origin request, before the formal communication, an HTTP query request called "preflight request" needs to be made to check whether the cross-origin request is secure and acceptable. The following requests are considered as non-simple cross-origin requests:

- The request is initiated in a method other than `GET`, `HEAD`, and `POST` or is initiated by using `POST` with a data type other than `application/x-www-form-urlencoded`, `multipart/form-data`, and `text/plain`, such as `application/xml` or `text/xml`.
- A custom request header is used.

`Access-Control-Max-Age` is measured in seconds. Here, the configuration sample `Access-Control-Max-Age: 1728000` indicates that no more preflight requests will be sent for the cross-domain access to this resource within 1,728,000 seconds (20 days).

#### Access-Control-Expose-Headers

`Access-Control-Expose-Headers` specifies which headers can be accessed when a cross-region request is initiated. By default, the following six types of headers can be exposed to the client:

- Cache-Control
- Content-Language
- Content-Type
- Expires
- Last-Modified
- Pragma

If you want the client to access other header information, you can set as follows (separate multiple headers with `;`):
`Access-Control-Expose-Headers: Content-Length, QCloud-DSA-MyCustom-HeaderY`

Then, the server will allow requests to contain the `Content-Length` and `QCloud-DSA-MyCustom-HeaderY` fields.

### Custom header

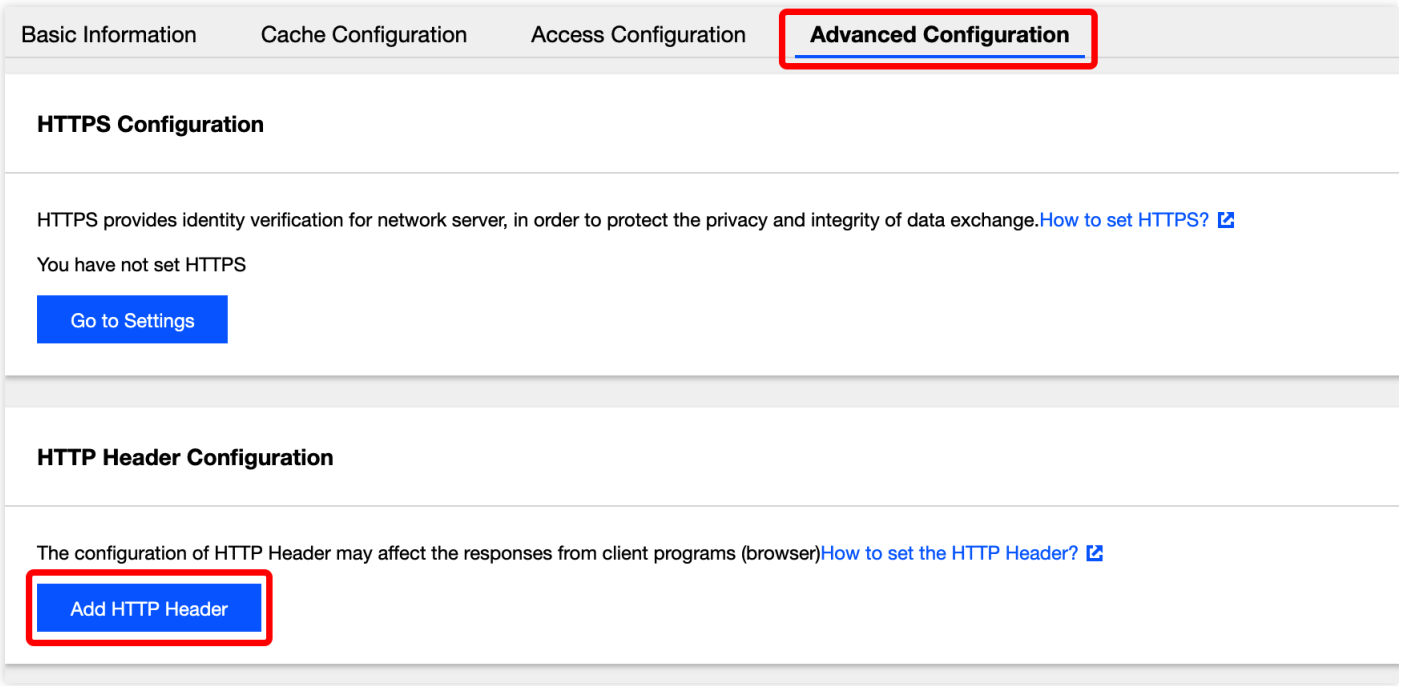
ECDN allows you to add custom headers as needed.
The following fields cannot be added currently:

```
Date
Expires
Content-Type
Content-Encoding
Content-Length
Transfer-Encoding
Cache-Control
If-Modified-Since
Last-Modified
Connection
Content-Range
ETag
Accept-Ranges
Age
Authentication-Info
Proxy-Authenticate
Retry-After
Set-Cookie
Vary
WWW-Authenticate
Content-Location
Content-MD5
```

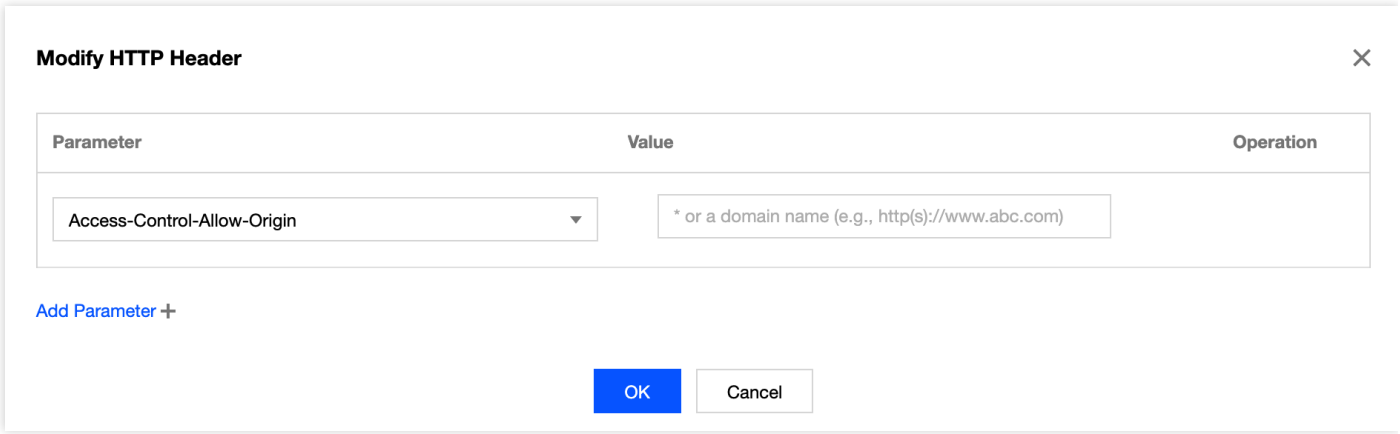
```
Content-Range
Meter
Allow
Error
```

## Configuration process

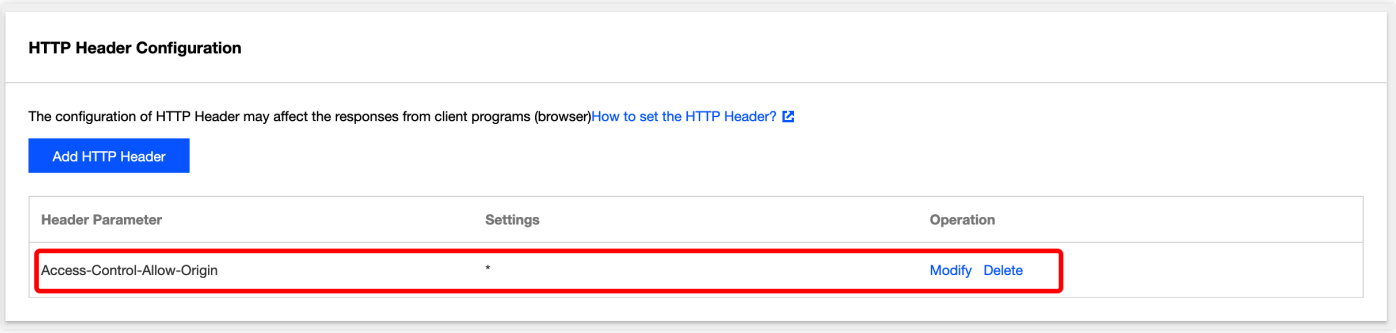
1. Log in to the ECDN Console and click **Domain Management** on the left sidebar. On the management page, click **Manage** on the right of the target domain name to enter the domain management page.
2. Click **Advanced Configuration** and click **Add HTTP Header** in the **HTTP Header Configuration** module.




3. In the pop-up window, select the HTTP header to be added and enter the corresponding value. You can click **Add Parameter** to add more header fields. Click **OK** to submit the settings.



4. The configuration will take effect in about 5 minutes. In the table at the bottom, you can view the added HTTP headers. You can click **Modify** or **Delete** on the right of a header to perform the corresponding operation as needed.




5. You can click **Add HTTP Header** to add more HTTP headers, each of which can be added only once.

# HTTPS Setting

Last updated：2021-08-05 12:26:43

## Configuration Description

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

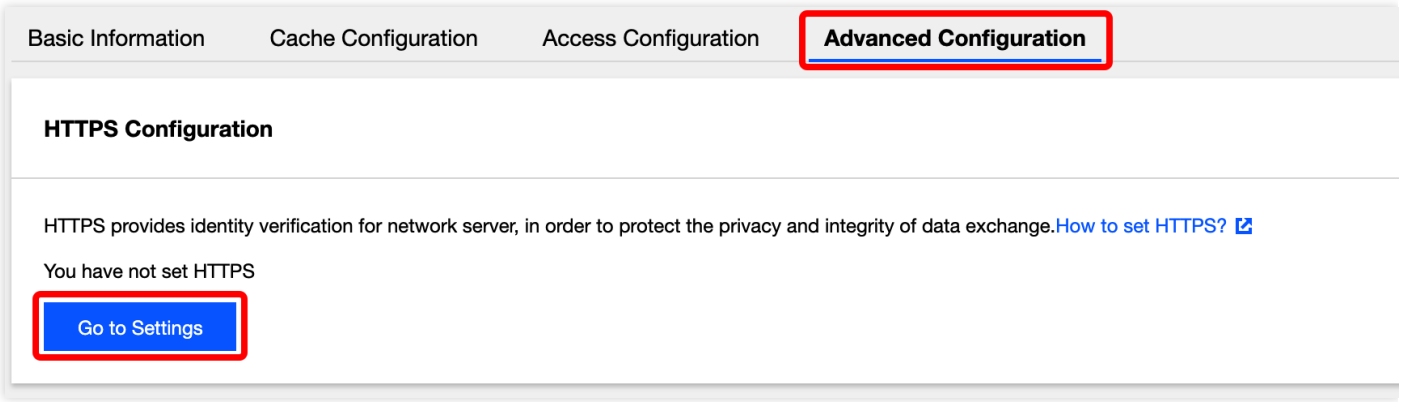
Note：

- Your domain name should have been connected to ECDN, and the status should be **deploying** or **activated**.
- If your application has been migrated to the CDN console, you can go to the console for operation by referring to Content Delivery Network.

## Adding Configuration

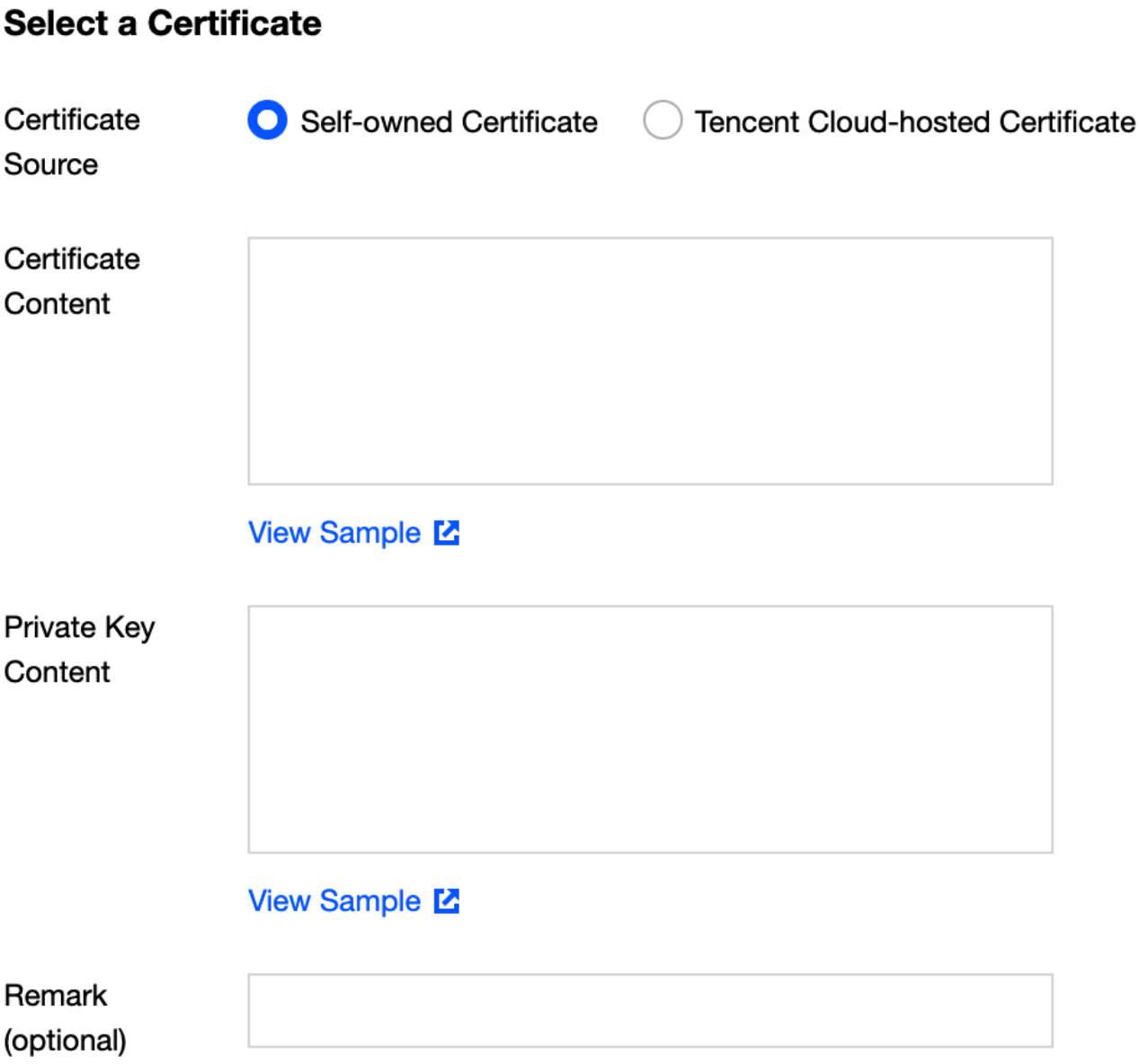
### Selecting domain name

1. Log in to the ECDN Console and click **Domain Management** on the left sidebar to enter the management page.
2. From the list, choose the domain name to configure, click **Manage** to enter your domain details, then select **Advanced Configuration**.
3. To use HTTPS, you need to deploy the domain name certificate first. Click **Go to Settings** to enter the certificate configuration page.




## Configuring certificate

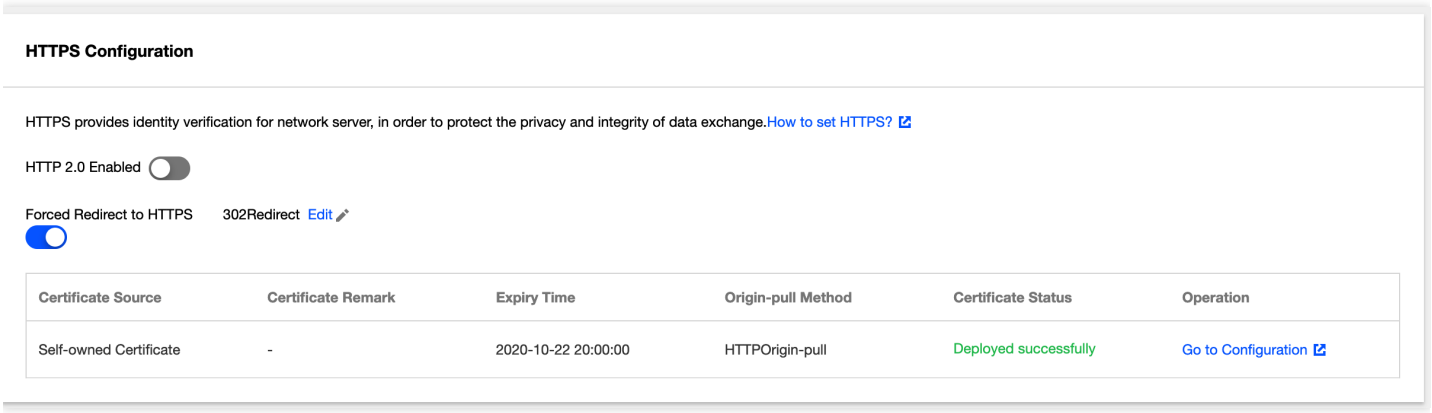
On the certificate configuration page, your domain name can be configured with your certificate or a certificate hosted by Tencent Cloud. For more details, please refer to Certificate Management.




## Modifying Configuration

- **Enabling HTTP2.0:**
  To use HTTP2.0 for your configured domain name, enable it on the advanced configuration page.
- **Enabling force HTTPS redirection:**
  To force any HTTP request to redirect to HTTPS, enable it for your configured domain name.
  You can also specify the status code to redirect, either 301 or 302 (default).

- **Modifying certificates and redirection:**
  To modify your certificate or redirection for your configured domain name, click **Go to Configuration** to enter the certificate management page.



# Alarm Monitoring Configuration

Last updated：2021-08-05 12:46:34

Note：
If your application has been migrated to the CDN console, you can go to the console for operation by referring to Content Delivery Network.

## Description of Connecting ECDN to Cloud Monitor

ECDN has been connected to Tencent Cloud Monitor. The following alarming metrics are supported in the current version:

| Category | Metric | 1-Minute Alarming Granularity Supported | 5-Minute Alarming Granularity Supported |
|---|---|---|---|
| Access traffic metrics | Total number of requests | Yes | Yes |
| | Access bandwidth | Yes | Yes |
| | Access traffic (upstream) | Yes | Yes |
| | Access traffic (downstream) | Yes | Yes |
| Origin-pull traffic metrics | Total number of origin-pulls | Yes | Yes |
| | Number of failed origin-pull | Yes | Yes |
| | Origin-pull failure rate | Yes | Yes |
| | Origin-pull bandwidth | Yes | Yes |
| Access performance metrics | Average response time | Yes | Yes |
| Status code metrics | Number of 200, 206, 2XX, etc. status code occurrences and their ratio | Yes | Yes |
| | Number of 302, 304, 3XX, etc. status code occurrences and | Yes | Yes |

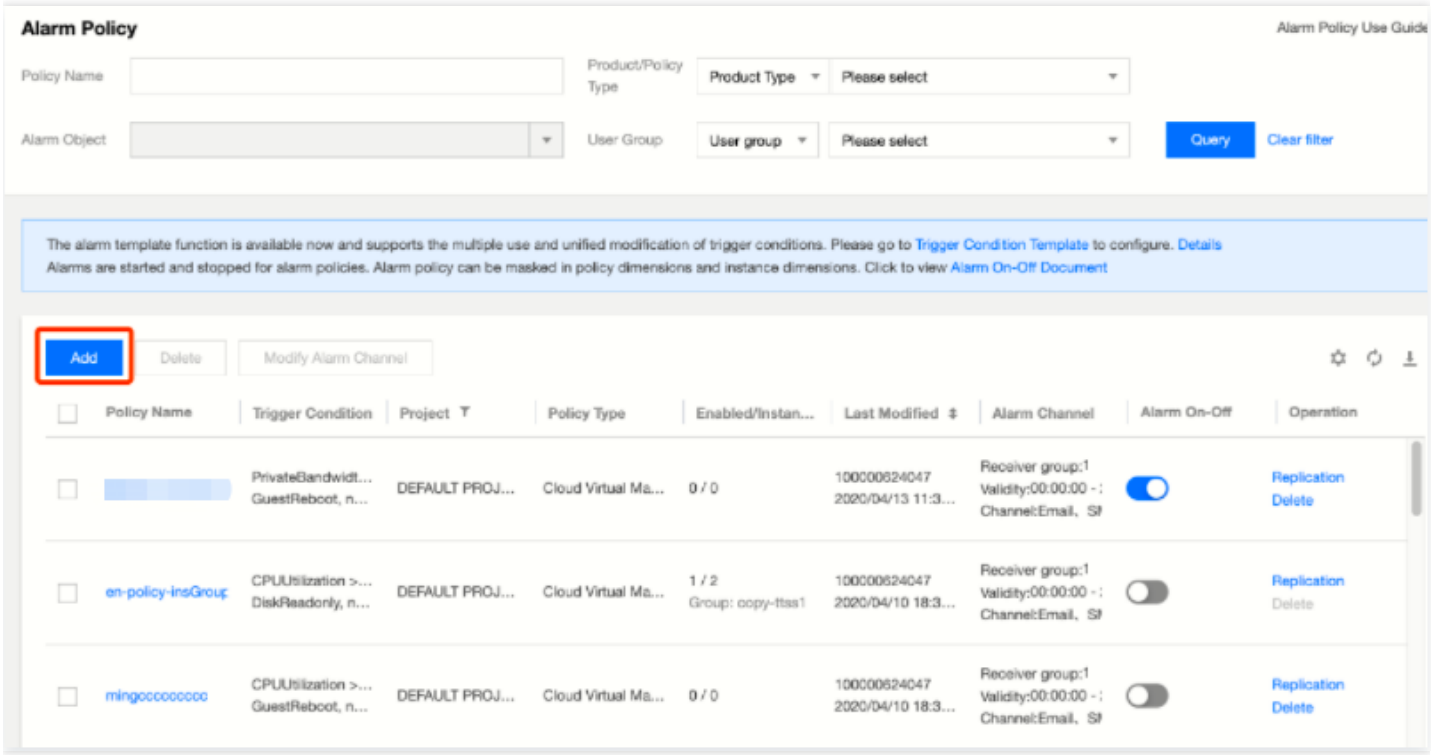
| | | | |
|---|---|---|---|
| | their ratio | | |
| | Number of 401, 403, 404, 416, 4XX, etc. status code occurrences and their ratio | Yes | Yes |
| | Number of 500, 502, 5XX, etc. status code occurrences and their ratio | Yes | Yes |

Note：

- You can activate and use Cloud Monitor free of charge.
- The system sends alarm messages through email, WeChat, and callback APIs free of charge, and you can enjoy a free tier of SMS alarm messages every month.
- If the monthly free tier of SMS alarm messages is exceeded, you need to purchase a higher tier for receiving more alarm messages through SMS.
- Alarm data is collected and reported in real time and may have certain deviation, as the data is delayed for about 5 minutes.
- Alarm data monitoring can be used only to assist in operation and cannot be used as the basis for billing or SLA.

## Monitoring Configuration Entry

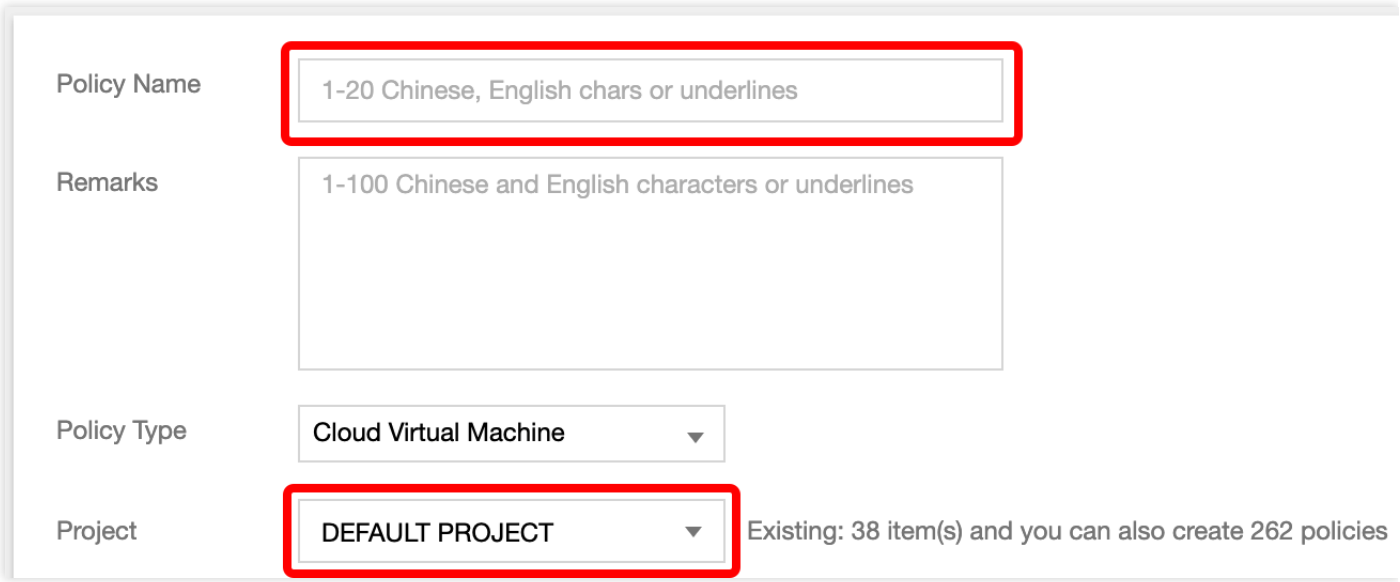
Log in to the Cloud Monitor Console and click **Alarm Policy** on the left sidebar to enter the management page.



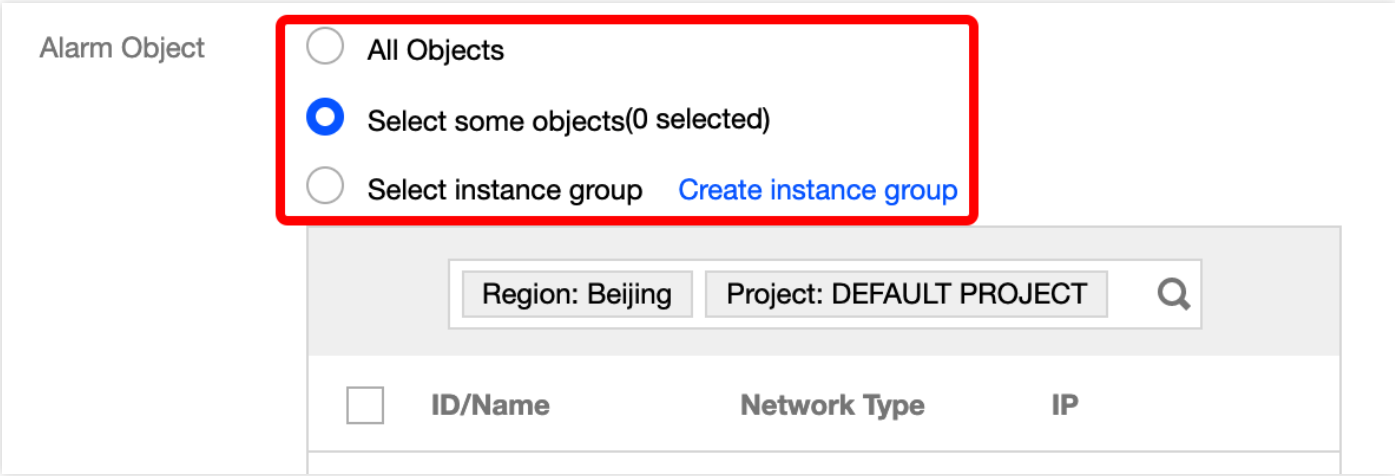

# Adding Alarm

The steps for adding an alarm policy are as follows:

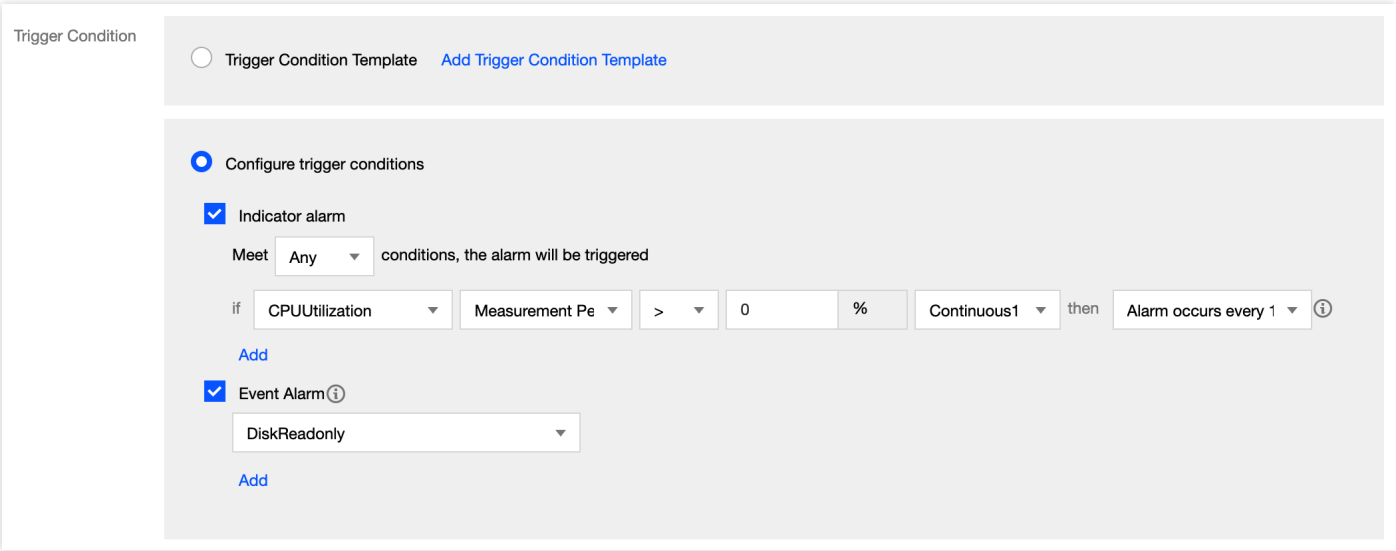
1. Enter the policy name and remarks and select the ECDN alarm policy type.



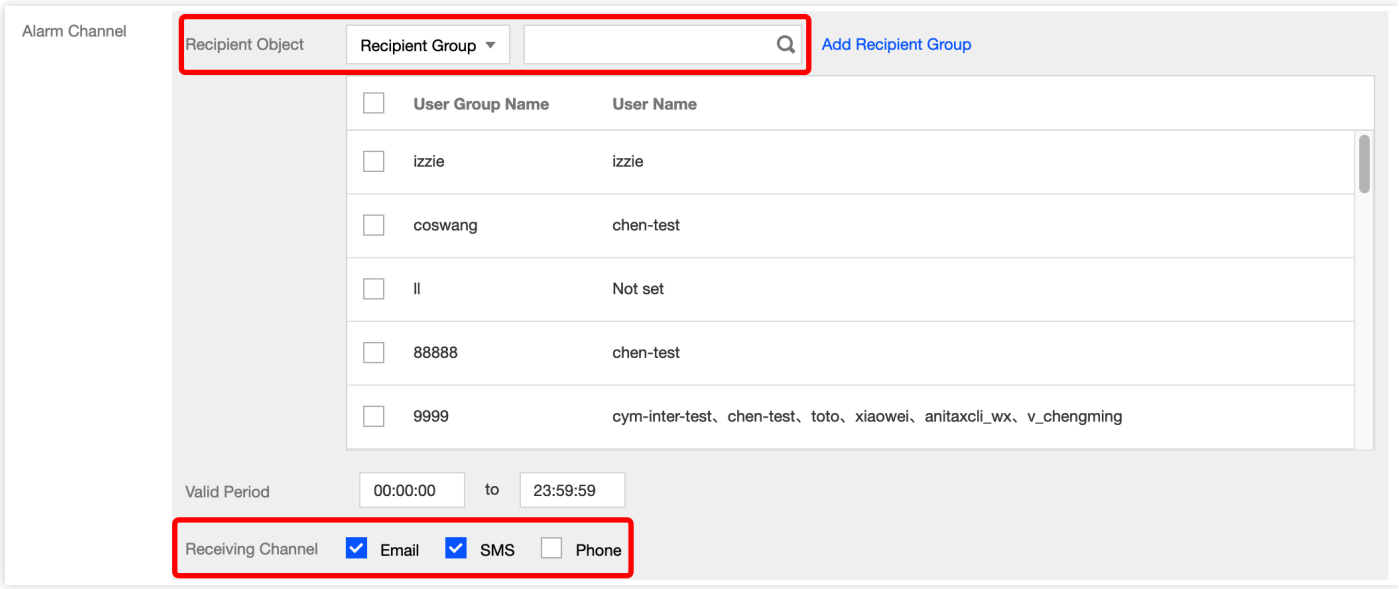
2. Select the alarm object.



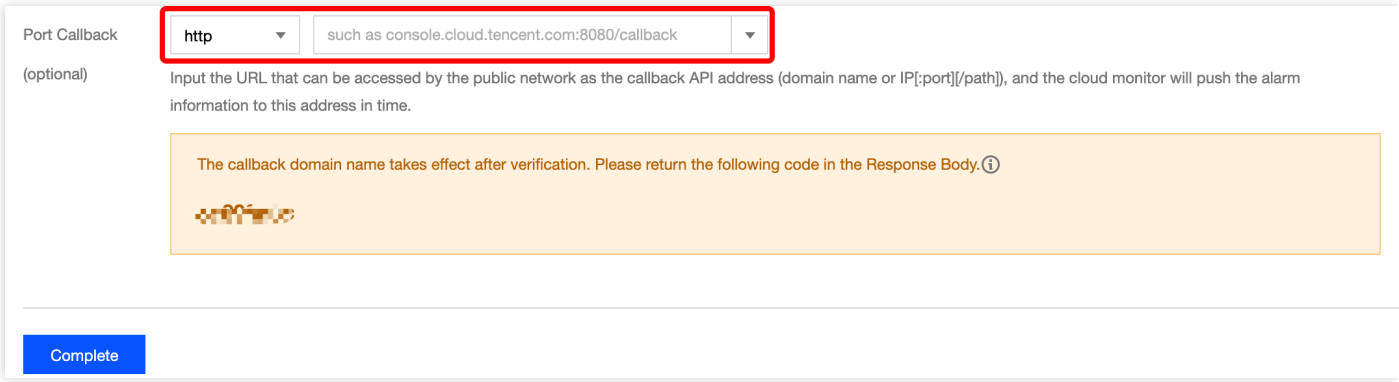

3. Set the alarm trigger condition. Multiple conditions can be set at a time.



4. Set the alarm recipient, alarm time period, and alarm method.



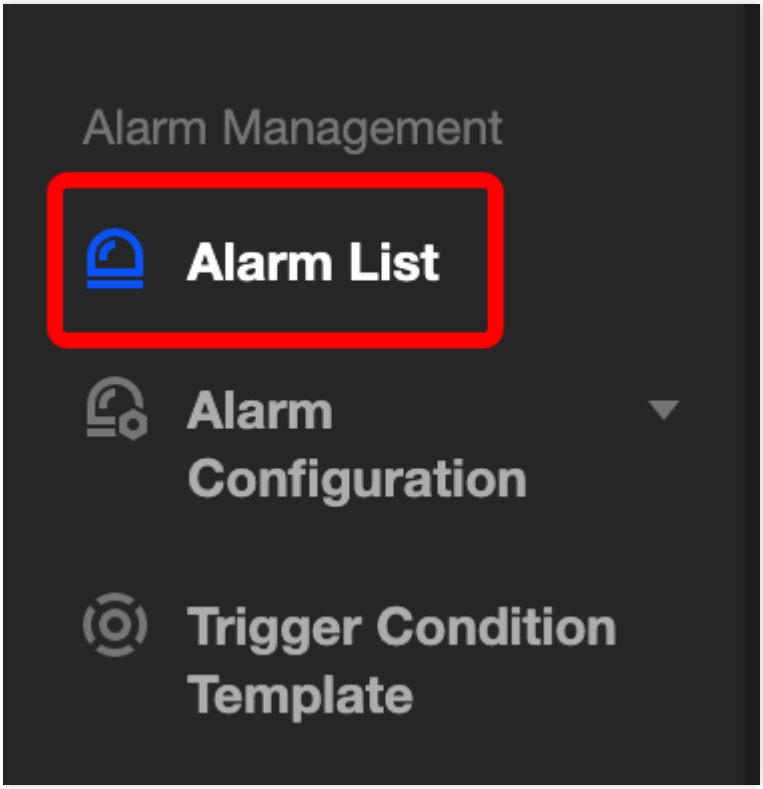

5. Set the alarm callback API.




6. Click **Complete** to submit the settings.

# Viewing Alarm

On the historical alarm page in Cloud Monitor, you can view the list of alarm details.




## Other Alarm Policies

For more information on how to configure alarm policies, please see Creating Alarm Policies.

# Origin-Pull Management
# Advanced Origin-Pull Policies

Last updated：2021-08-05 12:51:05

ECDN supports the following advanced origin-pull policies:

- **Optimal origin-pull**
  The best-performing origin server is selected for origin-pull based on the detection result.
- **Weighted origin-pull**
  Requests are assigned by weight for origin-pull based on the detection result.
- **Primary/secondary origin-pull**
  Your primary origin server is always a preferential option. The secondary works only if the primary is exceptional.

You can select one that is appropriate for your business needs.

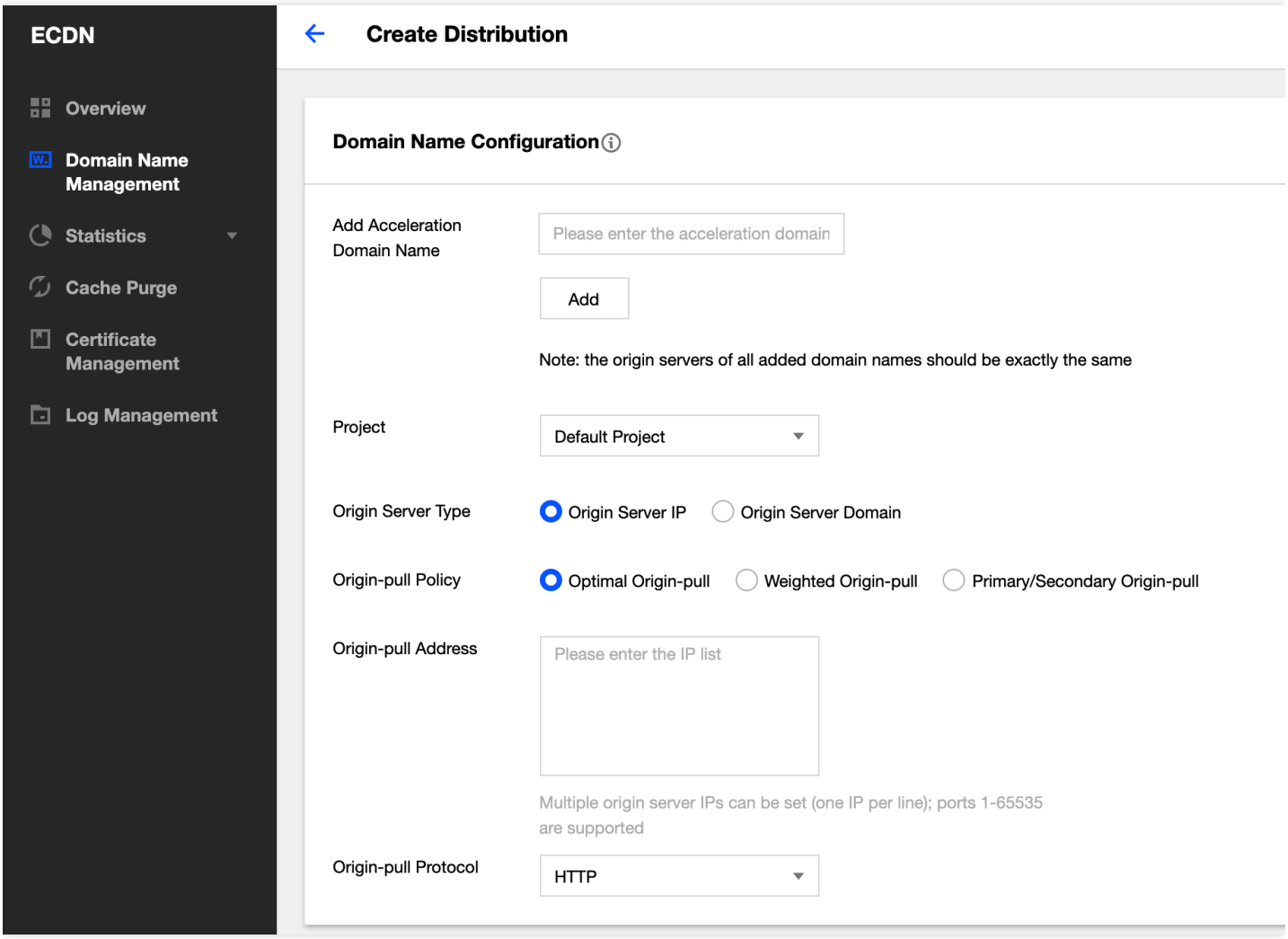
Note：

- The default policy for ECDN is optimal origin-pull.
- The origin type can be set to origin IP or origin domain when you use any one of three origin-pull policies.
- The actual weight for weighted origin-pull may be slightly different from the set as your requests are being taken care of.
- In a primary/secondary origin-pull, the secondary will be automatically triggered by a status code of 400–599 (except for 416) from the primary.
- If your application has been migrated to the CDN console, you can go to the console for operation by referring to Content Delivery Network.

## Adding Advanced Origin-Pull Policy

### 1. Optimal origin-pull

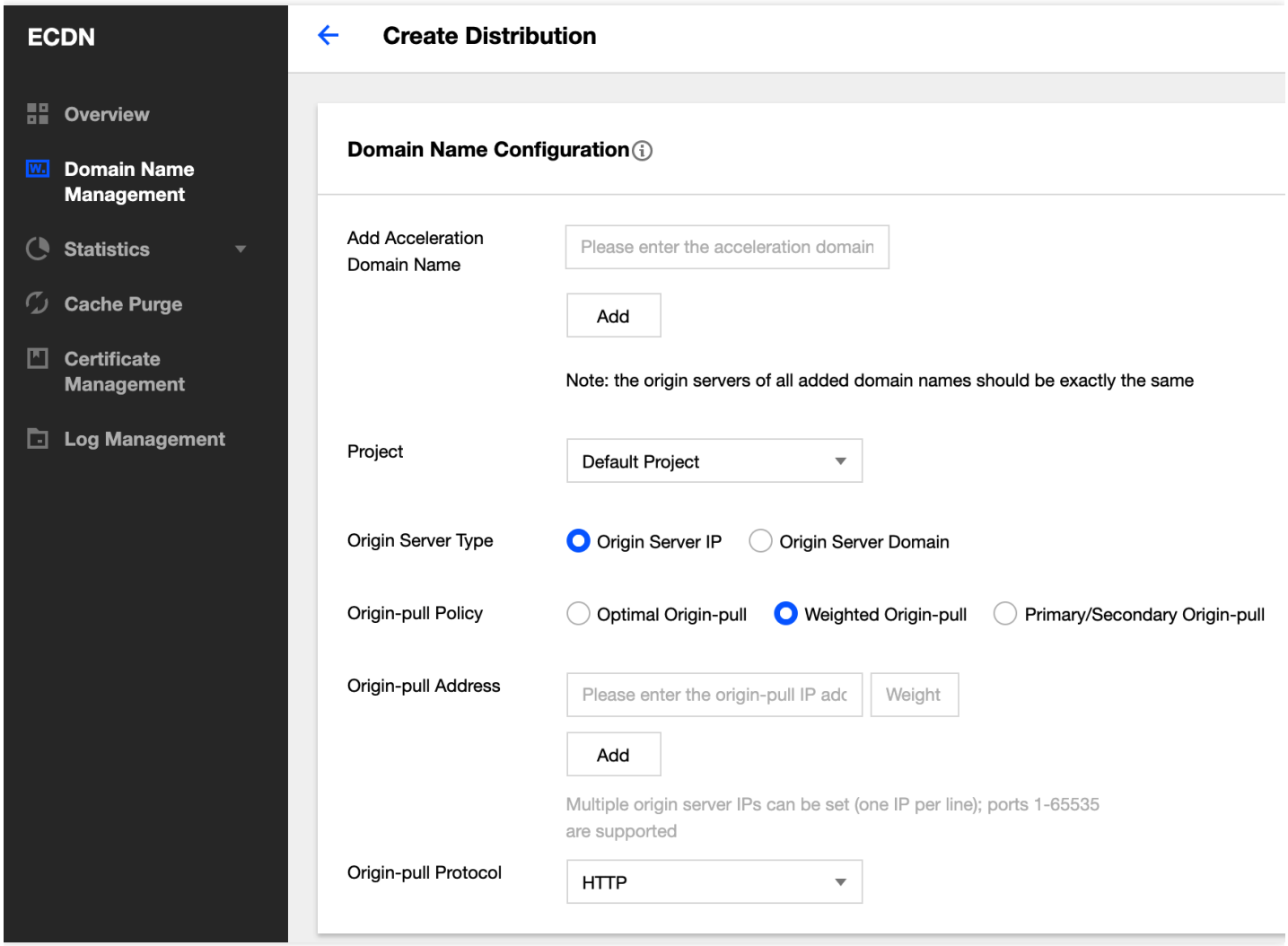
Optimal origin-pull is set as the default policy of the platform.




Note：
You cannot use the same domain name for your origin and acceleration if you set the origin type to origin domain.

## 2. Weighted origin-pull

You can assign weights for different origin servers based on their loading capabilities.

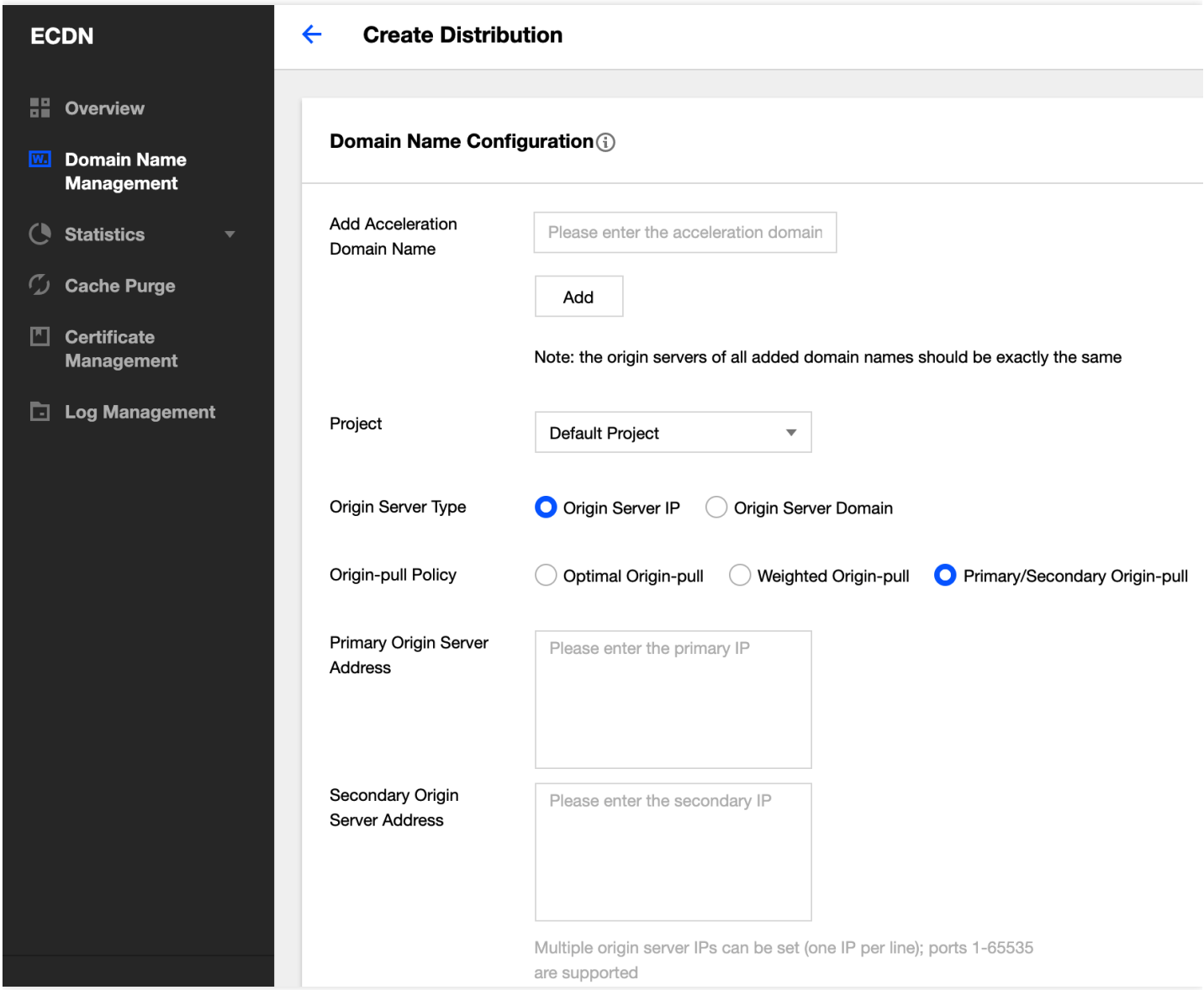



Note：

- A weight ranges from 0 to 100 (all zeros not allowed), and the system calculates the origin-pull ratio of different origin servers based on their weights.
- Up to 32 origin IP addresses or domain names can be configured. A mix of two types is not accepted.
- If you want to allow the list of ECDN intermediate node IPs, you can obtain the node information with this API ecdn.tencentcloudapi.com. To ensure origin-pull success, please access the latest node information and update your whitelist within 7 days after release.

### 3. Primary/secondary origin-pull

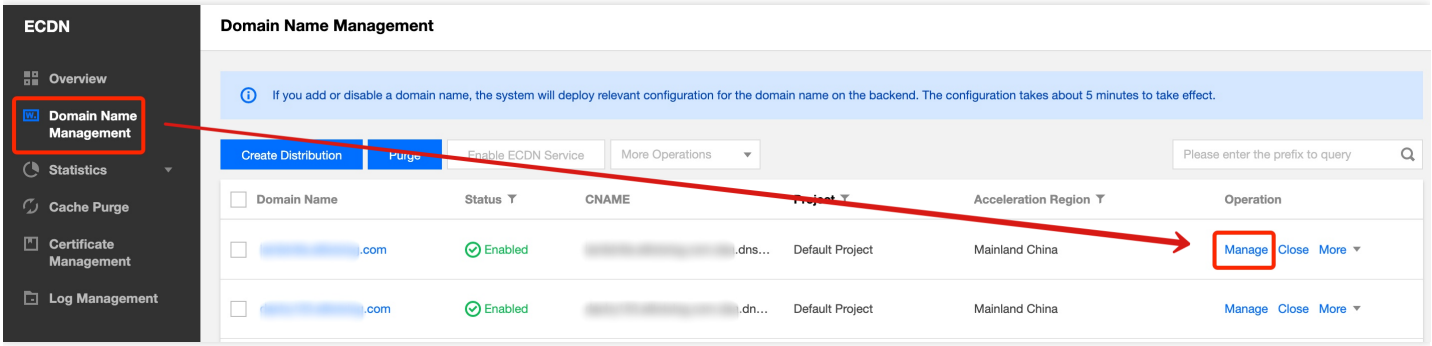
You can use this feature if you want to implement origin-pull based on a primary/secondary architecture.



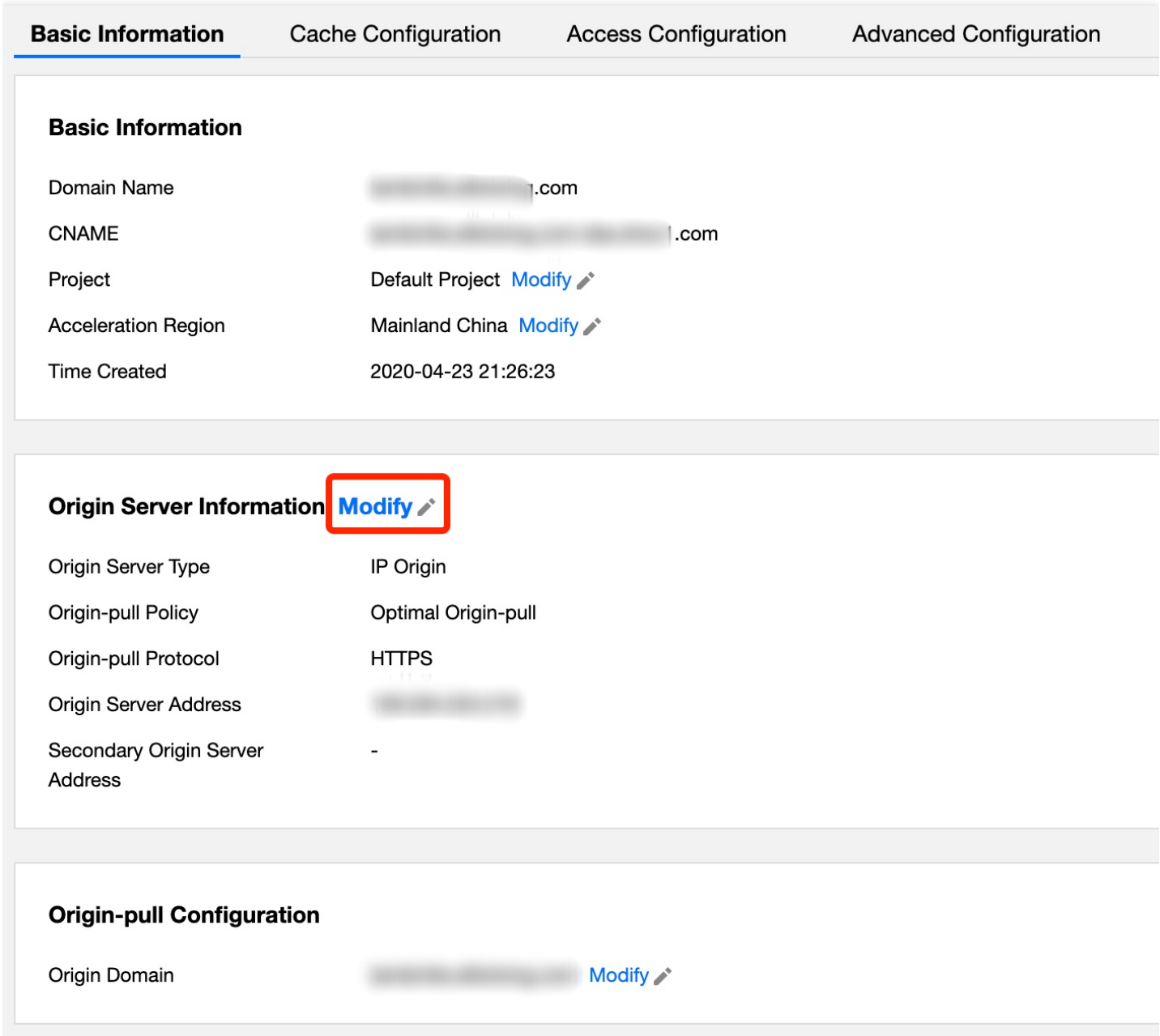

# Modifying Advanced Origin-Pull Policy

After adding a domain name, you can modify advanced origin-pull policies on the domain management page in the following steps:

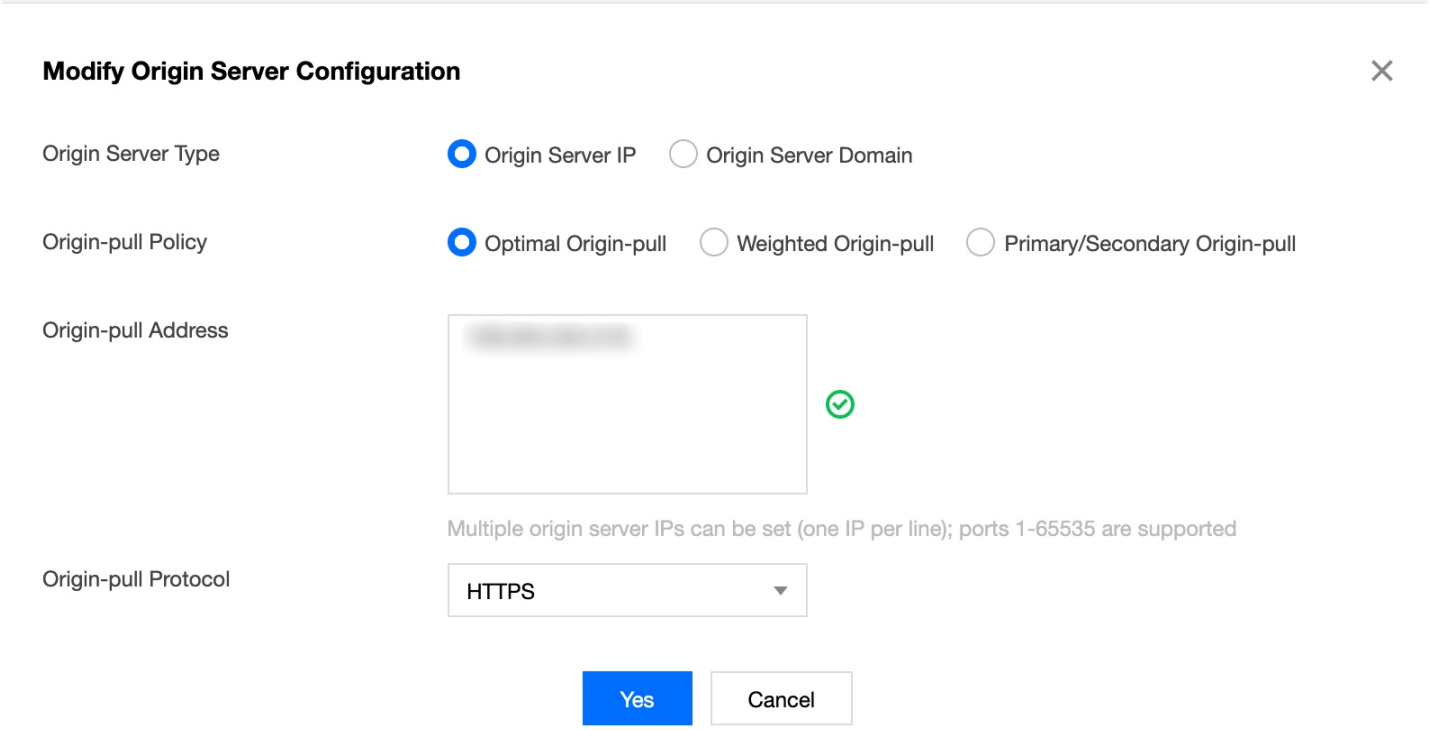
Step 1. Log in to the ECDN Console, click **Domain Management** on the sidebar, and click **Manage**.




Step 2. On the **Basic Info** page, you can view the origin server configuration information. Click **Modify** to enter the editing page.



Step 3. In the pop-up window, you can adjust the origin server configuration as needed. For more information, please see Adding Advanced Origin-Pull Policy.




Note：

- The origin server configuration takes 5–30 minutes to be distributed and take effect.
- When adding an origin server address, please make sure that the origin server has been enabled for service; otherwise, some requests may fail after the switch.
- Before deleting an origin server address, delete the origin server configuration on the ECDN platform first and then disable the origin server service so as to reduce the risks of origin server switch.

# Permission Management
# Console Permission Description

Last updated：2020-04-28 14:50:48

Cloud Access Management (CAM) is a web-based service that helps you securely manage access permissions, resources, and usage permissions for your Tencent Cloud account. With CAM, you can create, manage, and terminate users (groups), and control the Tencent Cloud resources that can be used by the specified user through identity and policy management. For more information, please see User Guide.

ECDN supports resource-level authorization. By specifying the `Action` and `Resource` to create a custom policy, you can directly call APIs to perform operations on resources such as acceleration domain names. This document describes the mappings between console features and `Action` .

## Overview

| Feature Module | Authorized Action | Remarks |
| --- | --- | --- |
| My service - Connected domain names | DescribeDomains | The total number of authorized domain names will be displayed |
| My service<br>• Total number of requests in the current month<br>• Total traffic in the current month<br>• Average bandwidth in the current month | DescribeEcdnStatistics | The access data of authorized domain names in the current month will be displayed |

| Feature Module | Authorized Action | Remarks |
| --- | --- | --- |
| Today's data | DescribeEcdnStatistics | Today's access data of authorized domain names will be displayed |
| Request trend in the current month | DescribeEcdnStatistics | The trend curve of requests in the current month will be displayed |

## Domain Management

| Feature Module | Authorized Action | Remarks |
| --- | --- | --- |
| Domain name list and query | DescribeDomains | Basic configuration items of a domain name can be queried or displayed<br>To get all detailed configuration items, `DescribeDomainsConfig` should be authorized |
| Adding domain name | AddEcdnDomain | - |
| Deactivating ECDN | StopEcdnDomain | - |
| Activating ECDN | StartEcdnDomain | - |
| Deleting domain name | DeleteEcdnDomain | - |

| Feature Module | Authorized Action | Remarks |
| --- | --- | --- |
| Modifying domain name project | UpdateDomainConfig | The domain name project is in the domain name configuration All configuration items of a domain name can be modified after authorization |
| Domain name configuration management | UpdateDomainConfig<br>DescribeDomainsConfig | All configuration items of a domain name can be viewed/modified after authorization |

## Statistical Analysis

| Feature Module | Authorized Action | Remarks |
| --- | --- | --- |
| Usage statistics | DescribeEcdnDomainStatistics<br>DescribeEcdnStatistics | All access data metrics under a domain name can be queried after authorization |
| Status code statistics | DescribeEcdnStatistics | All status code metrics under a domain name can be queried after authorization |

## Cache Purge

| Feature Module | Authorized Action |
| --- | --- |
| Submitting URLs for purge | PurgeUrlsCache |
| Submitting directories for purge | PurgePathCache |

| Feature Module | Authorized Action |
| --- | --- |
| Querying purge records | DescribePurgeTasks |

## Certificate Management

| Feature Module | Authorized Action | Remarks |
| --- | --- | --- |
| Querying certificate list | DescribeDomainsConfig | All configuration items of a domain name can be viewed after authorization |
| Configuring certificate | UpdateDomainConfig | All configuration items of a domain name can be modified after authorization |
| Batch configuring certificates | UpdateDomainsHttps | It is used to configure certificates in batches |

## Log Service

| Feature Module | Authorized Action |
| --- | --- |
| Querying log download link | DescribeEcdnDomainLogs |

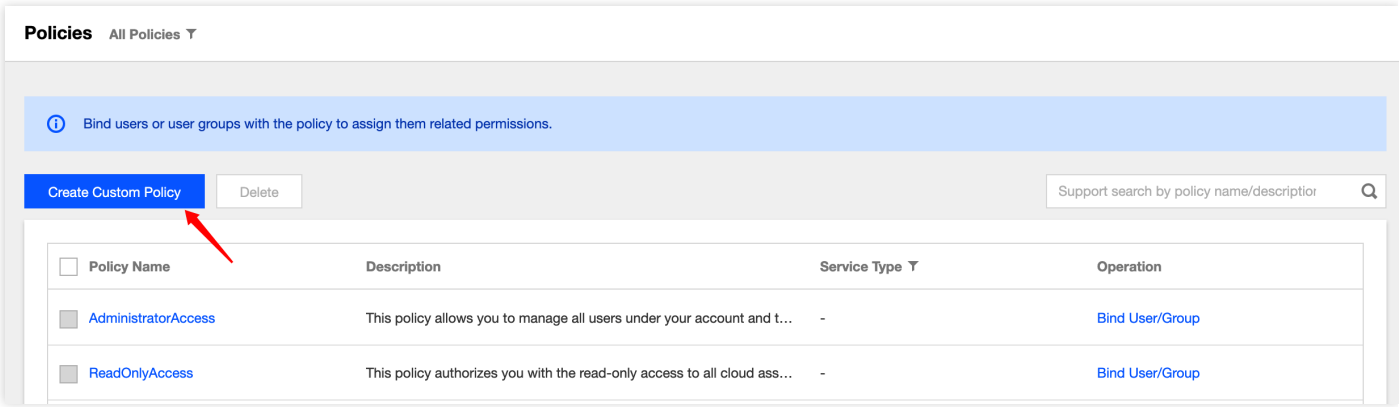
# Creating Policies

Last updated：2021-08-12 10:25:13

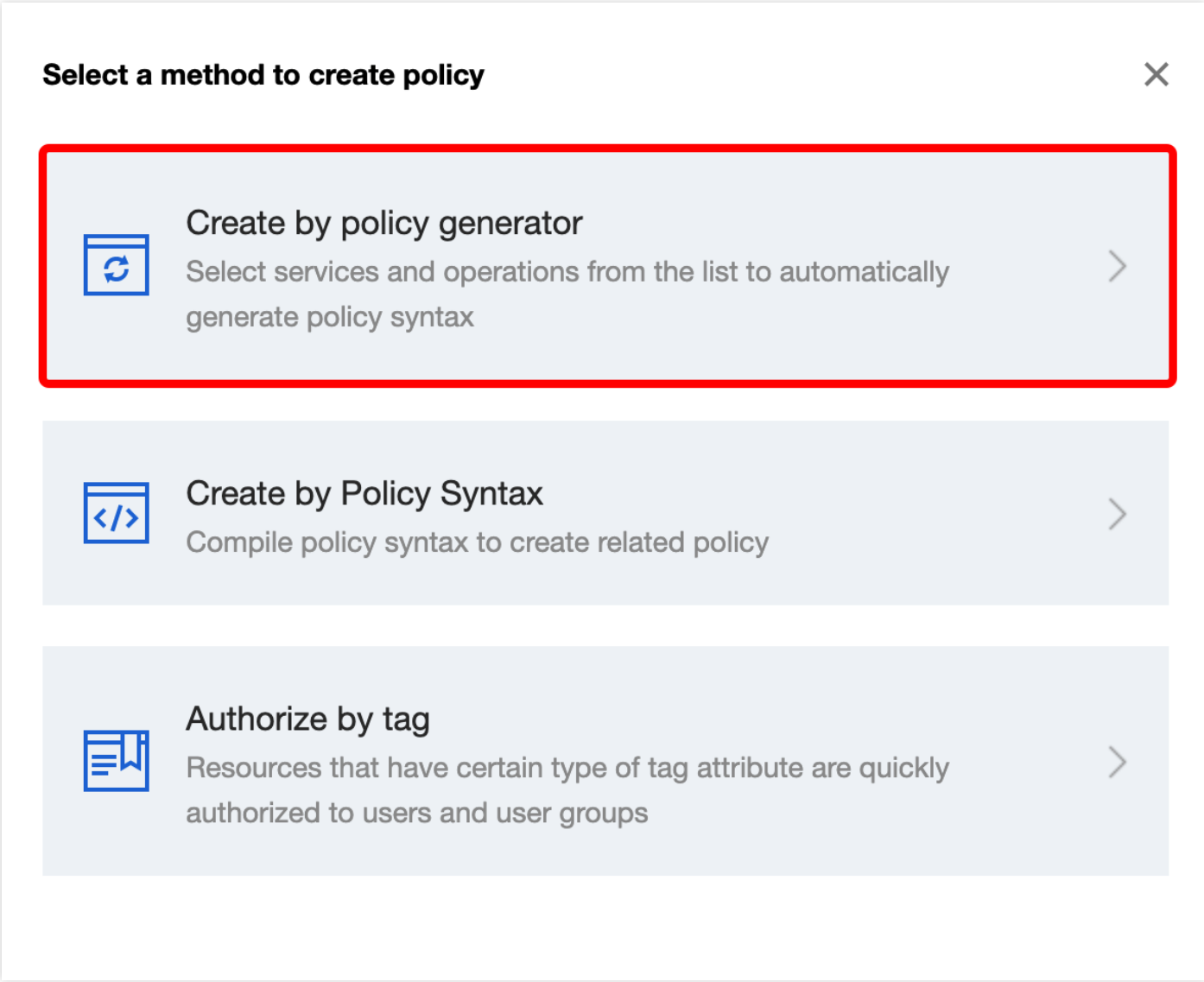
Note：
If your application has been migrated to the CDN console, you can go to the console for operation by referring to Content Delivery Network.

To make it easier for you to configure domain name queries and manage permissions in a more refined manner, the ECDN permission policies have been completely upgraded, so that you can grant permissions at the domain name level through custom policy statements.

1. Log in to the CAM Console and click **Policies** to enter the policy management page. Click **Create Custom Policy**:

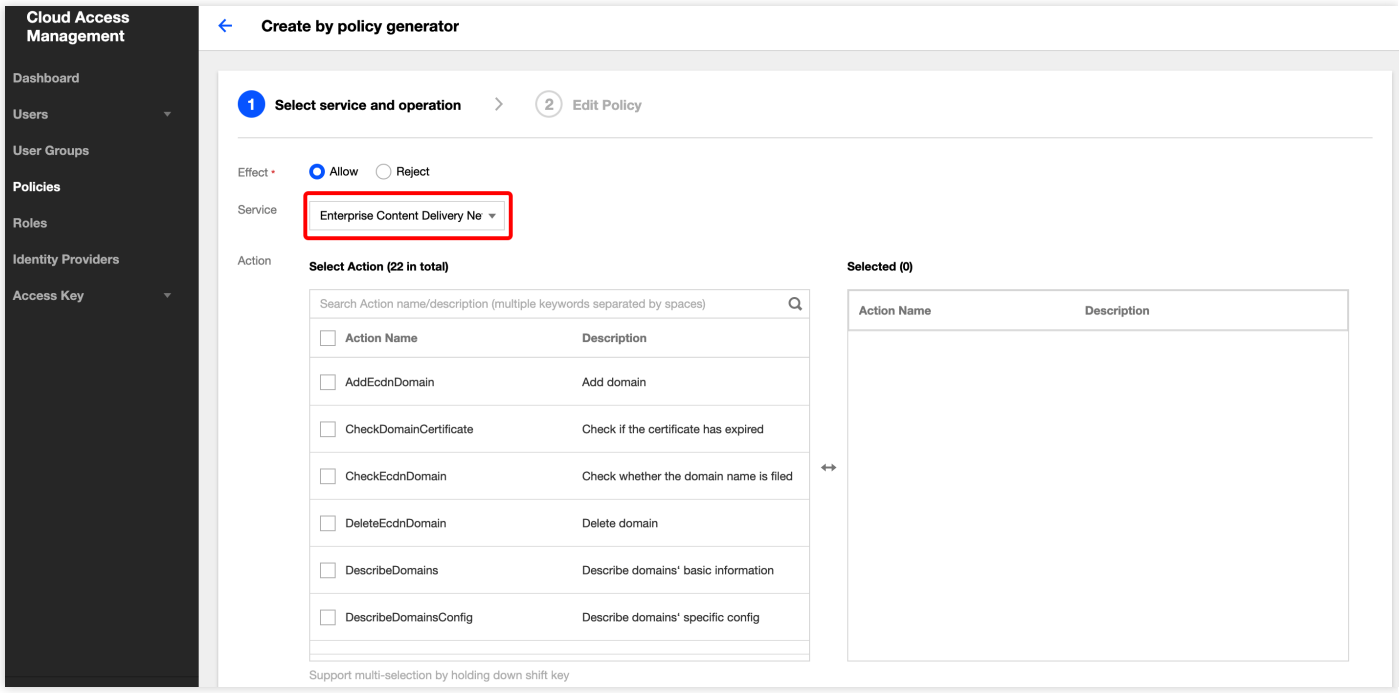


2. Select **Create by Policy Generator**:

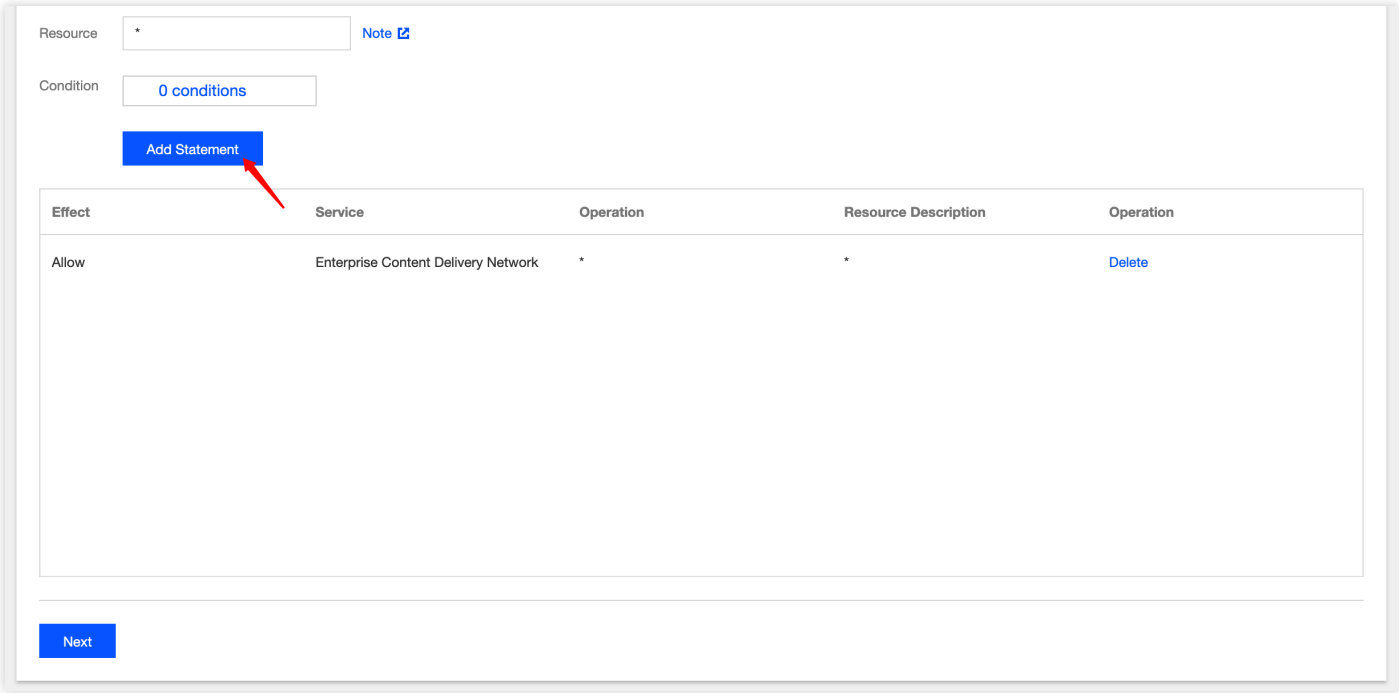



3. Select **ECDN** in the product drop-down list and select features to be authorized. If you want to grant full read/write permission, check **All** to select all services. For mappings between features and console elements, please see

Console Permission Description.

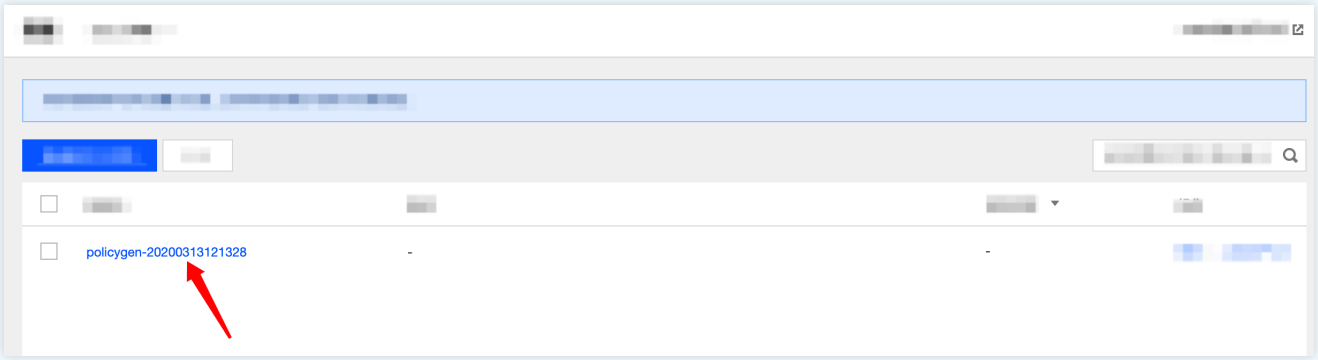


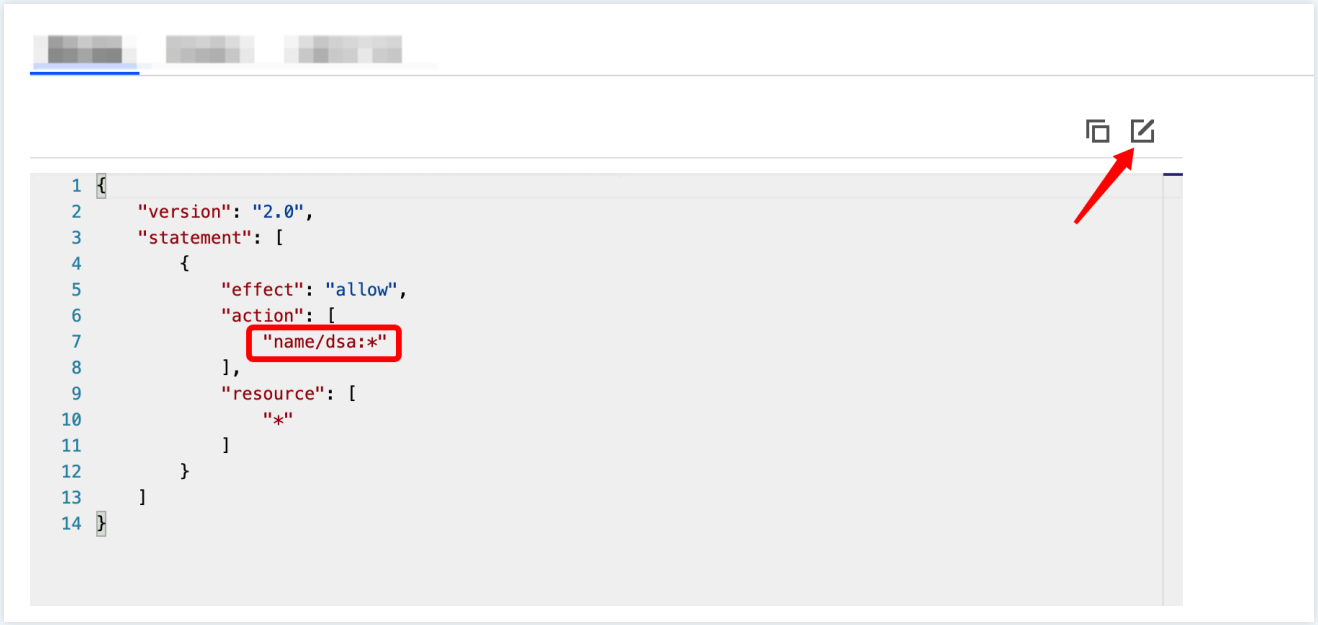

4. Enter the domain name that needs to be authorized as the "resource" in the format of `qcs::ecdn::uin/xxxxxxxxxx:domain/xxx.com`, where you should replace `xxxxxxxxxx` with your account ID, and `xxx.com` with the domain name you will authorize. You can directly enter `*` to represent all domain names. After the configuration is complete, click **Add Statement** and **Next** to create a policy. Then associate the created policy with existing users/user groups for further authorization:



Note：

Due to product upgrade and rename, the DSA custom policy you configured needs to be modified. Click **Edit** on the policy details page, change “dsa” to “ecdn” in the policy statement, and map the original DSA permission policy to the ECDN permission policy.



```
{
    "version": "2.0",
    "statement": [
        {
            "effect": "allow",
            "action": [
                "name/dsa:*"
            ],
            "resource": [
                "*"
            ]
        }
    ]
}
```

# Statistical Analysis
# Statistics Overview

Last updated：2020-04-28 14:50:53

ECDN provides the following data analysis and query tools to give you a comprehensive view of user access to your business resources:

| Statistics Type | Description |
| --- | --- |
| Access statistics | You can view statistics of access to domain names and projects, including the number of requests, access traffic, and response time |
| Status code statistics | You can view the statistics of status codes of the acceleration service |

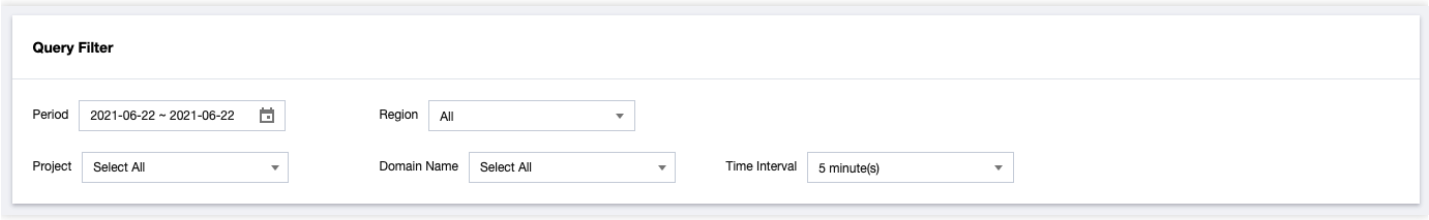
# Access Statistics

Last updated：2021-06-25 11:15:36

ECDN usage statistics allow you to query historical statistics and monitoring data. You can view metrics such as the number of requests, access traffic, and response time.
You can log in to the ECDN Console, then click **Statistics** on the left sidebar to enter the Usage Statistics page and try out this feature.

## Query Filters

- Period: queries data in the last 12 calendar months with a maximum time span of 31 days.
- Project: queries usage by project.
- Domain Name: queries usage of the specified domain name.
- Granularity: indicates an interval in which you query data and is subject to the selected period.
  i. For a 1-day period, you can query data at a granularity of 5 minutes, 15 minutes, 30 minutes, 1 hour, 2 hours, 4 hours, or 24 hours.
  ii. For a period of 2–3 days, you can query data at a granularity of 15 minutes, 30 minutes, 1 hour, 2 hours, or 4 hours.
  iii. For a period of 4–7 days, you can query data at a granularity of 30 minutes, 1 hour, 2 hours, or 4 hours.
  iv. For a period of 8–30 days, you can query data at a granularity of 1 hour, 2 hours, 4 hours or 24 hours.
- Region: queries usage by geographic area (regions within Mainland China or outside, or global regions).



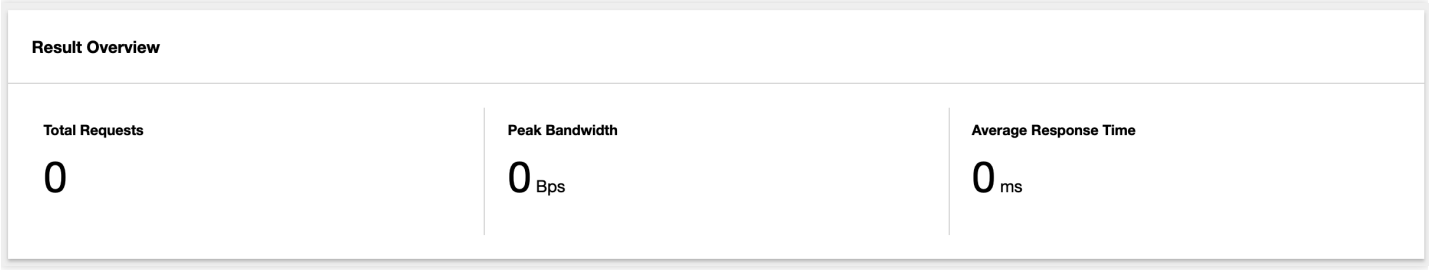

## Usage Data Display

The usage data is displayed in three statistics modules:

- Data overview: displays the total usage.
- Monitoring details: displays detailed historical usage in curves.
- Domain name statistics: displays usage of each domain name in a list.

## Query profile

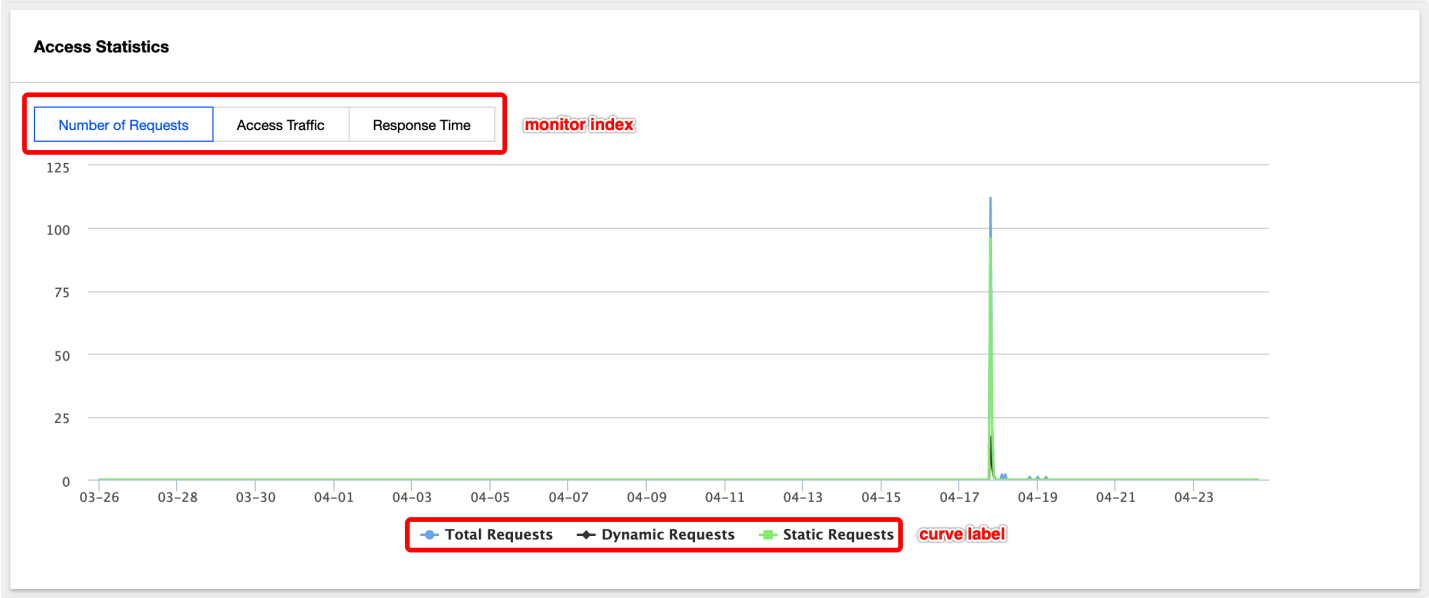
As shown below, the query profile page displays statistics by account. You can quickly view the total usage in the specified query period.




## Access statistics

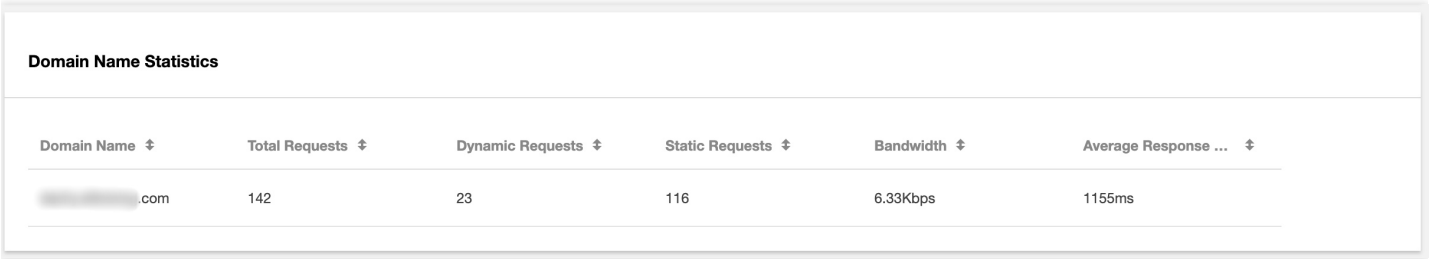
The access statistics section displays curves of historical monitoring data. You can view data of metrics in different categories.

- All domain names that were connected in the last 30 days, including deleted ones, will be included in the **All Domain Names** drop-down list.
- The real-time monitoring data you query will have a near 5-minute lag. If you run a query at 14:26:00, you will get the 00:00:00–14:21:00 data.
- Monitoring data is tracked over a time interval. For a 5-minute interval, a query start at 10:00:00–10:04:59 will start at the 10:00:00 sample point.
- If the time you query is longer than that of domain name connection, you will only get the connection statistics rather than those unconnected or deleted.
- To query monitoring data of multiple domain names or metrics, you can use the DescribeEcdnStatistics API.




## Domain name statistics

As shown below, the list of domain name statistics displays the usage details. You can sort different metrics to view the data.



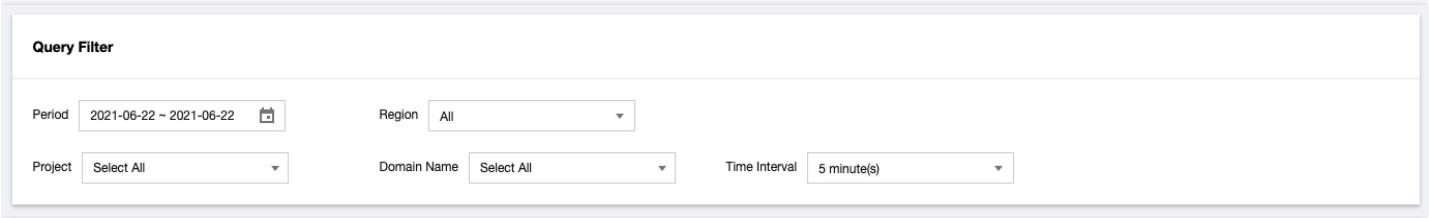
# Status Code Statistics

Last updated：2021-06-25 11:17:49

ECDN status code statistics allow you to query monitoring data of status codes. You can log in to the ECDN Console, then click **Statistics** on the left sidebar to enter the Status Code Statistics page and try out this feature.

## Query Filters

- Period: queries data in the last 12 calendar months with a maximum time span of 31 days.
- Project: queries usage by project.
- Domain Name: queries usage of the specified domain name.
- Granularity: indicates an interval in which you query data and is subject to the selected period.
  i. For a 1-day period, you can query data at a granularity of 5 minutes, 15 minutes, 30 minutes, 1 hour, 2 hours, 4 hours, or 24 hours.
  ii. For a period of 2–3 days, you can query data at a granularity of 15 minutes, 30 minutes, 1 hour, 2 hours, or 4 hours.
  iii. For a period of 4–7 days, you can query data at a granularity of 30 minutes, 1 hour, 2 hours, or 4 hours.
  iv. For a period of 8–30 days, you can query data at a granularity of 1 hour, 2 hours, 4 hours or 24 hours.
- Region: queries usage by geographic area (regions within Mainland China or outside, or global regions).

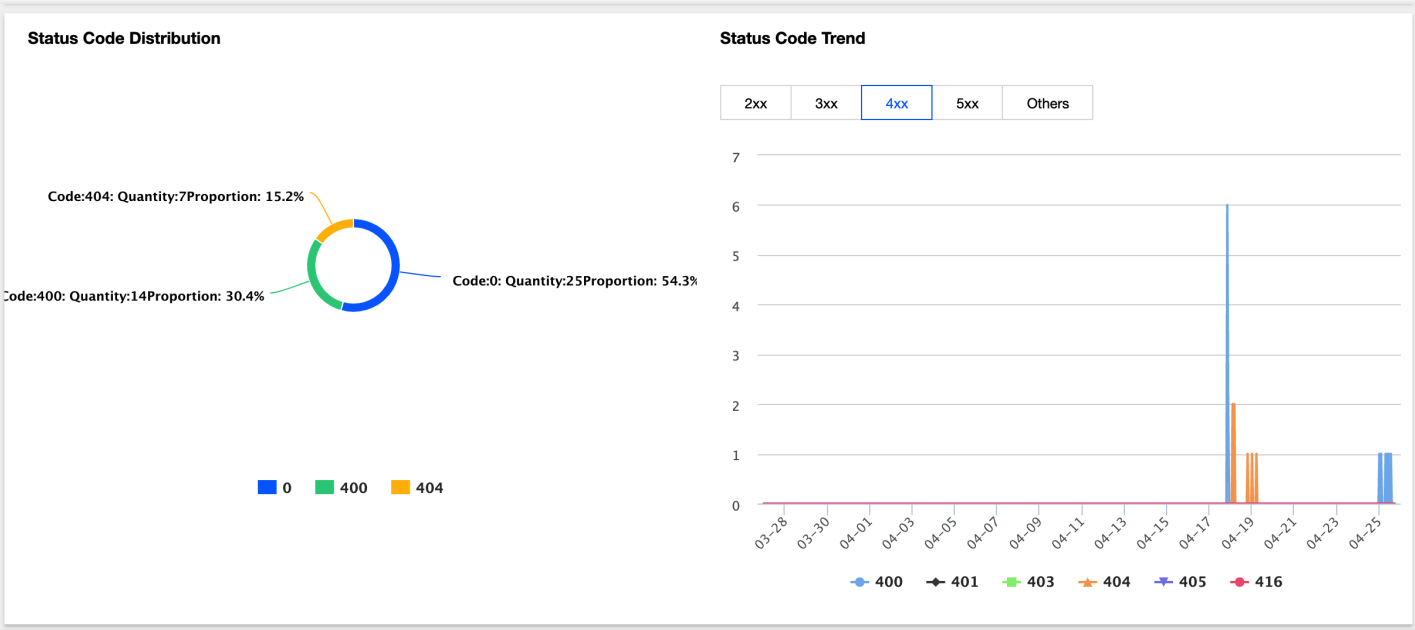



## Status Code Data Display

Status code data is displayed in a pie chart and a trend curve. All data can be exported.

- All domain names that were connected in the last 30 days, including deleted ones, will be included in the **All Domain Names** drop-down list.
- The real-time monitoring data you query will have a near 5-minute lag. If you run a query at 14:26:00, you will get the 00:00:00–14:21:00 data.

- Monitoring data is tracked over a time interval. For a 5-minute interval, a query start at 10:00:00–10:04:59 will start at the 10:00:00 sample point.
- If the time you query is longer than that of domain name connection, you will only get the connection statistics rather than those unconnected or deleted.
- To query monitoring data of multiple domain names or metrics, you can use the DescribeEcdnStatistics API.




# Status Code Description

```
<tr>
<td>533</td>
<td>ECDN edge or relay transfer fails, read times out, or connection establishmen
t fails.</td>
<td>Please<a href="https://console.tencentcloud.com/workorder/category"> submit a
ticket </a>for assistance.</td>
```

| Category | Status Code | Description | Solution |
| --- | --- | --- | --- |
| 2XX | 200 | The access succeeds. | A 2XX status code generally indicates a normal access state. |
| | 206 | The access succeeds. | |
| | | | |

| | | | |
|---|---|---|---|
| 3XX | 301 | The accessed content has been permanently migrated. | A 3XX status code generally indicates a normal access state. |
| | 302 | The access is redirected. | |
| | 304 | The content to be accessed has not changed. | |
| 4XX | 400 | A request parameter is incorrect. | A 4XX status code generally indicates that the client request is incorrect or the acceleration service of the domain name has been disabled. |
| | 401 | The access request verification fails. | |
| | 403 | Access to the content is denied. | |
| | 404 | The requested content cannot be found. | |
| | 405 | The request method is not supported. | |
| | 416 | The range is invalid. | |
| 5XX | 500 | An internal server error occurs. | Please check whether the origin server service is exceptional; if not, please |
| | 502 | The server cannot | |

| | | |
|---|---|---|
| | provide service currently. | submit a ticket for assistance. |
| 501 | The request method is not supported by the server and cannot be processed. | Please check the request method. |
| 513 | The ECDN edge server is overloaded, which is generally caused by user request surge or CC attacks. | Please check that the business request surge of the domain name is normal. |
| 522 | Internal HTTP ECDN connection establishment fails, or HTTP ECDN origin-pull connection establishment fails. | Please check that the origin server port 80 has been opened. |
| 529 | The domain name is newly added, and the route configuration has not taken effect. | It takes 5–10 minutes for the platform to deploy the configuration. Please confirm that the configuration has taken effect before switching to |

| | | | | |
|---|---|---|---|---|
| | | | the CNAME resolution. | |
| | | The ping command is blocked by the origin server, and the origin-pull route information cannot be obtained. | You need to grant the ping permission on your ECDN intermediate nodes. You can submit a ticket to get the list of IPs of ECDN intermediate nodes. | |
| | 538 | HTTPS SSL handshake fails, internal ECDN transfer fails, or ECDN origin-pull SSL handshake fails. | Please check that the origin server port 443 has been opened and SSL handshake is normal. | |
| | 564 | ECDN origin-pull times out. | Please check whether there are jitters on the origin server egress network. | |
| | Other | 0 | The client actively closes the connection during response. | Generally, it is caused by a client network problem or active stop of |

| | | | | |
|---|---|---|---|---|
| | | | | access by the user. |

# Cache Purge

Last updated：2021-08-05 14:43:55

## Feature Overview

ECDN is capable of configuring basic cache. Cache expiration time can be configured according to rules such as specified business types, directories, and specific URLs to regularly purge resources cached on nodes, pull latest resources from the origin server and cache them again.

> Note：
> If your application has been migrated to the CDN console, you can go to the console for operation by referring to Content Delivery Network.

In addition, ECDN can purge cache for specified URLs or directories in batches:

- Purge URL: Delete the cache of corresponding resources on all ECDN nodes.
- Purge directory: if you select the "Purge Changed Resources" mode, when an end user accesses a resource under the corresponding directory, the `Last-Modify` information of the resource will be obtained from the origin-pull. If it is the same as that of the currently cached resource, the cached resource will be directly returned; otherwise, the changed resource will be pulled from the origin server and cached again. If you select the "Purge All Resources" mode, when the user accesses a resource under the corresponding directory, the latest version of the resource will be directly pulled from the origin server and cached again.

After a purge is successfully executed, the corresponding resource on the node does not have a valid cache. When the user initiates an access request again, the node will pull the required resource from the origin server and cache it on the node again. If you submit a large number of purge tasks, many caches will be cleared, resulting in a surge in origin-pull requests and high pressure on the origin server.

## Use Cases

### New resource release

After a resource is overwritten by a new one with the same name on the origin server, to prevent users on the entire network from accessing the legacy version of the resource cached on the node, you can submit a request to purge the URL/directory for the resource and clear all caches so users can directly access the latest version of the resource.

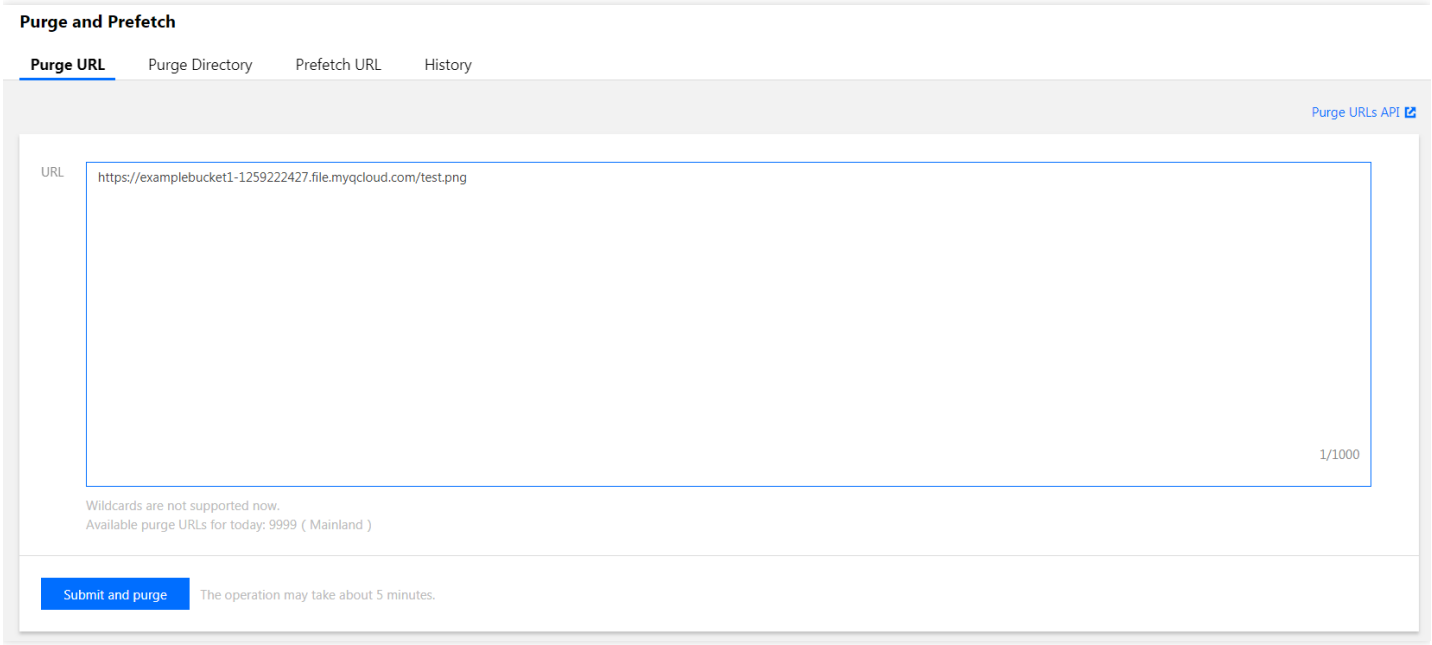
### Illegal resource cleanup

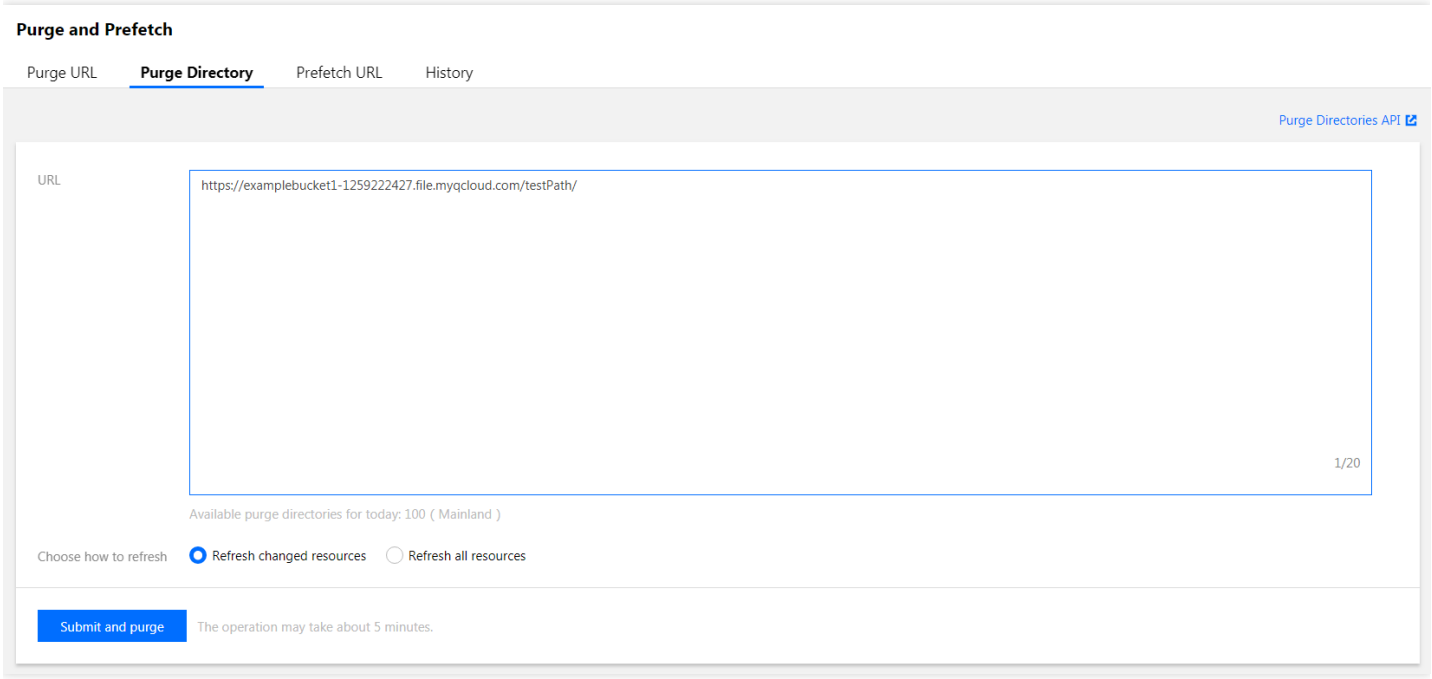
When illegal resources (such as resources related to pornography, drug, or gambling) are found on your origin server, they may still be accessible even after you delete them on the origin server because of node cache. To protect your network environment security, you can delete the cached resources through URL purge for timely cleanup.

# Operation Guide

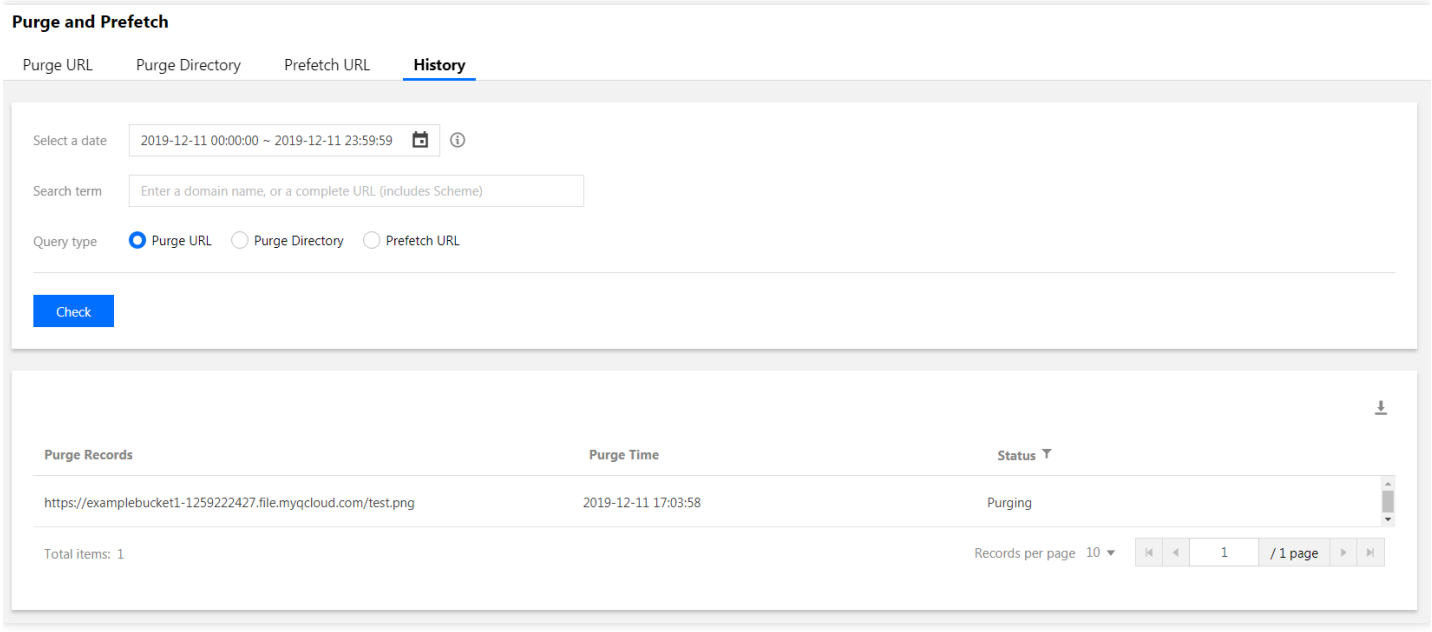
### How to use

Log in to the ECDN Console, click **Purge and Prefetch** on the left sidebar, and submit a **Purge URL** or **Purge Directory** task:






In the **History** section, you can query tasks by specified time period, keyword, and purge task type. With regard to keyword, you can only query tasks by specifying a domain name or a complete purged URL/directory:




## Precautions

### URL purge:

- Up to 10,000 URLs can be purged per day for each account, and up to 1,000 URLs can be submitted for purge at a time.

- You need to add the `http://` or `https://` protocol identifier when submitting a purge task.
- URLs in the format of `http://*.test.com/` cannot be purged. Even if you connect a wildcard domain name to CDN, you need to submit the corresponding sub-domain names for purge.
- When submitting URLs for purge, domain names should have already been connected to CDN; otherwise, the submission will fail.
- URLs containing Chinese characters cannot be purged.
- By default, URLs will be purged by acceleration regions of domain names in the URLs.

**Directory Purge:**

- Up to 100 directories can be purged per day per account, and up to 20 directories can be submitted for purge at a time.
- You need to add the `http://` or `https://` protocol identifier when submitting a purge task.
- Directories in the format of `http://*.test.com/` cannot be purged. Therefore, even if you connect a wildcard domain name to CDN, you need to submit the corresponding sub-domain names for purge.
- When submitting URLs for purge, domain names should have already been connected to CDN; otherwise, the submission will fail.
- URL directories containing Chinese characters cannot be purged.

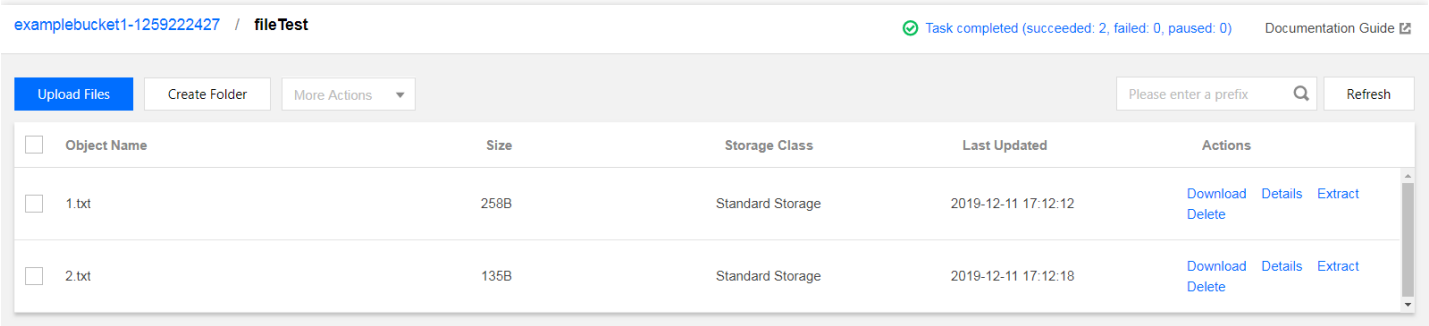
**Sub-user permissions configuration:**

- The operations of directory purge, URL purge, and purge history query must have already been connected to the latest permission system and support permission configuration at the resource (domain name) level.
- For permission assignment method, please see Permission Configuration.

# Use Cases

## Directory purge - purge changed resources

The acceleration domain name is purge-test-1251991073.file.myqcloud.com, the origin server is Tencent Cloud Object Storage (COS), and resources on the origin server are as follows:

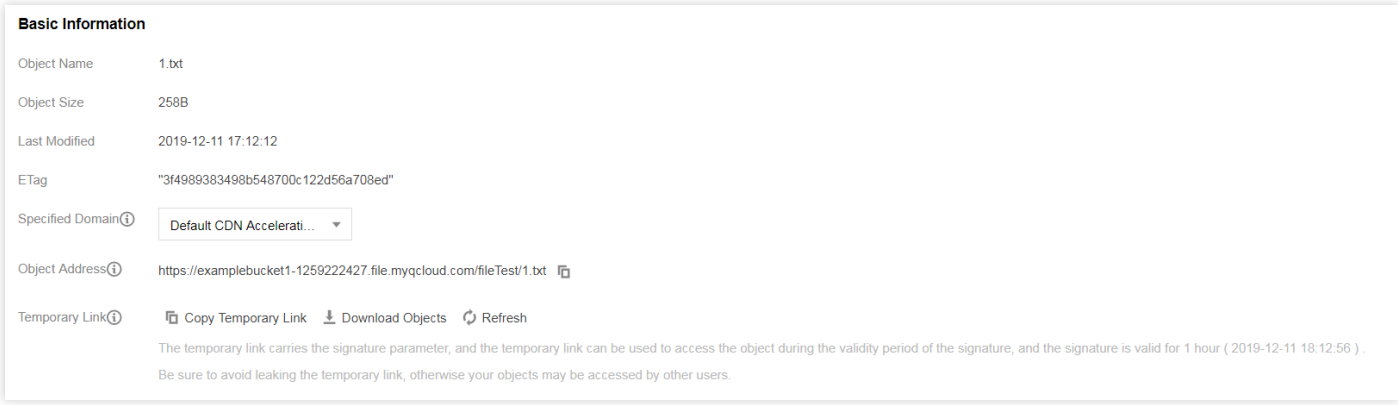


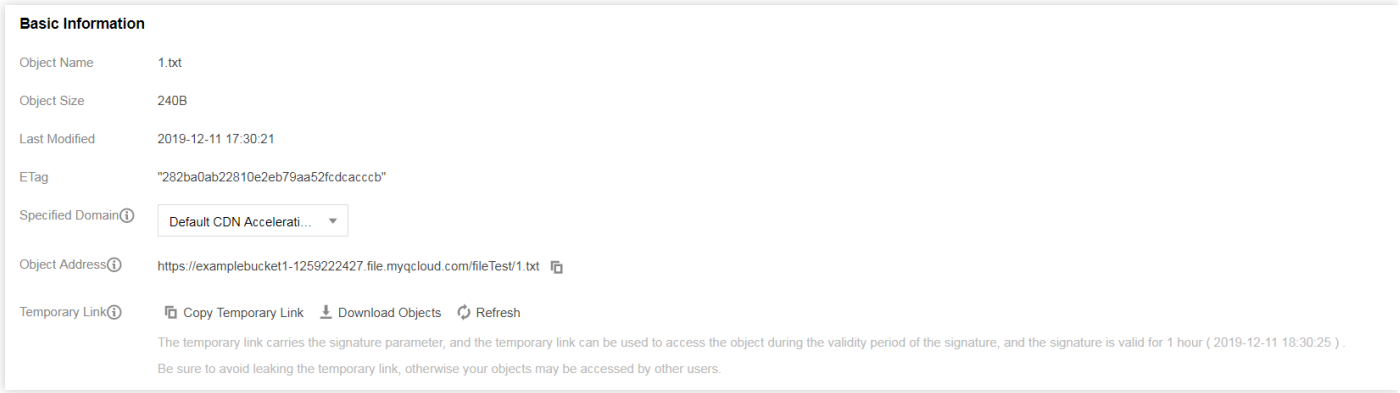
1. Initiate requests to access resources `1.txt` and `2.txt` respectively. Nodes to be hit can be determined based on X-Cache-Lookup: Hit From Disktank3 and Server: NWS_SPMid, resources will be directly returned by the nodes:

```
[root@VM_0_14_centos ~]# curl https://examplebucket1-1259222427.file.myqcloud.com/fileTest/1.txt -sv
* About to connect() to examplebucket1-1259222427.file.myqcloud.com port 443 (#0)
*   Trying 101.69.121.120...
* Connected to examplebucket1-1259222427.file.myqcloud.com (101.69.121.120) port 443 (#0)
* Initializing NSS with certpath: sql:/etc/pki/nssdb
*   CAfile: /etc/pki/tls/certs/ca-bundle.crt
  CApath: none
* SSL connection using TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256
* Server certificate:
*       subject: CN=*.weixin.qq.com,O=Shenzhen Tencent Computer Systems Company Limited,L=shenzhen,ST=guangdong,C=CN
*       start date: May 13 08:45:29 2019 GMT
*       expire date: May 13 08:45:29 2020 GMT
*       common name: *.weixin.qq.com
*       issuer: CN=GlobalSign Organization Validation CA - SHA256 - G2,O=GlobalSign nv-sa,C=BE
> GET /fileTest/1.txt HTTP/1.1
> User-Agent: curl/7.29.0
> Host: examplebucket1-1259222427.file.myqcloud.com
> Accept: */*
>
< HTTP/1.1 200 OK
< Date: Wed, 11 Dec 2019 09:28:53 GMT
< Content-Type: text/plain
< Content-Length: 258
< Connection: keep-alive
< Server: nws_ocmid_hy
< Cache-Control: max-age=600
< Expires: Wed, 11 Dec 2019 09:38:53 GMT
< Last-Modified: Wed, 11 Dec 2019 09:12:12 GMT
< X-NWS-UUID-VERIFY: b45f12ce9711b2c57b1a7b35904ac403
< X-NWS-LOG-UUID: d4f507fc-38a5-4a35-bf59-2cbf2f392855
< X-Cache-Lookup: Hit From Disktank3
< Accept-Ranges: bytes
< X-Daa-Tunnel: hop_count=3
< X-Cache-Lookup: Hit From Inner Cluster
< X-Cache-Lookup: Hit From Upstream
< X-Cache-Lookup: Hit From Inner Cluster
<
* Connection #0 to host examplebucket1-1259222427.file.myqcloud.com left intact
```

```
[root@VM_0_14_centos ~]# curl https://examplebucket1-1259222427.file.myqcloud.com/fileTest/2.txt -sv
* About to connect() to examplebucket1-1259222427.file.myqcloud.com port 443 (#0)
*   Trying 101.71.72.212...
* Connected to examplebucket1-1259222427.file.myqcloud.com (101.71.72.212) port 443 (#0)
* Initializing NSS with certpath: sql:/etc/pki/nssdb
*   CAfile: /etc/pki/tls/certs/ca-bundle.crt
  CApath: none
* SSL connection using TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256
* Server certificate:
*       subject: CN=*.weixin.qq.com,O=Shenzhen Tencent Computer Systems Company Limited,L=shenzhen,ST=guangdong,C=CN
*       start date: May 13 08:45:29 2019 GMT
*       expire date: May 13 08:45:29 2020 GMT
*       common name: *.weixin.qq.com
*       issuer: CN=GlobalSign Organization Validation CA - SHA256 - G2,O=GlobalSign nv-sa,C=BE
> GET /fileTest/2.txt HTTP/1.1
> User-Agent: curl/7.29.0
> Host: examplebucket1-1259222427.file.myqcloud.com
> Accept: */*
>
< HTTP/1.1 200 OK
< Date: Wed, 11 Dec 2019 09:24:54 GMT
< Content-Type: text/plain
< Content-Length: 135
< Connection: keep-alive
< Server: nws_ocmid_hy
< Cache-Control: max-age=600
< Expires: Wed, 11 Dec 2019 09:34:54 GMT
< Last-Modified: Wed, 11 Dec 2019 09:12:18 GMT
< X-NWS-UUID-VERIFY: 236746c2d95b242ef56fdf904c1c9e50
< X-NWS-LOG-UUID: 6858ac8e-58d1-4959-a25a-45521dbebf5d
< X-Cache-Lookup: Hit From Disktank3
< Accept-Ranges: bytes
< X-Daa-Tunnel: hop_count=2
< X-Cache-Lookup: Hit From Inner Cluster
< X-Cache-Lookup: Hit From Upstream
<
* Connection #0 to host examplebucket1-1259222427.file.myqcloud.com left intact
```

2. On the origin server, replace `1.txt` with a file that has the same name, and the file's last modified time changes, while `2.txt` stays the same:

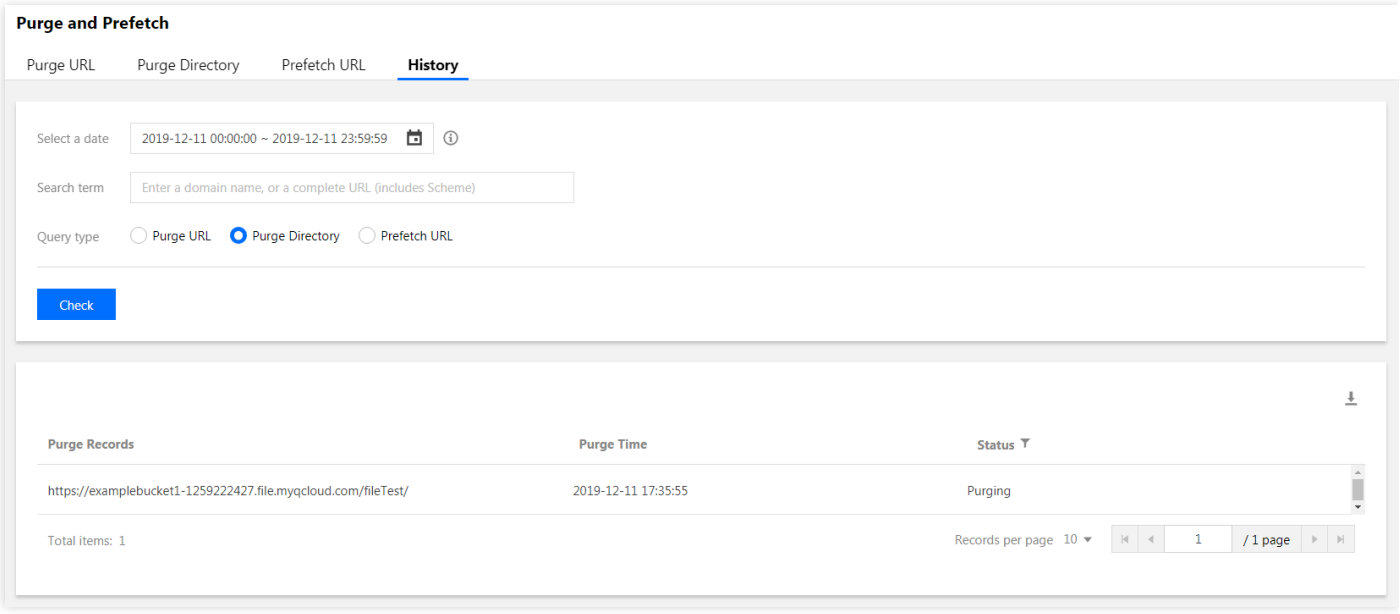



3. Initiate requests again. As the cache has not expired, the legacy content of the `1.txt` resource will be accessed:

```
[root@VM_0_14_centos ~]# curl https://examplebucket1-1259222427.file.myqcloud.com/fileTest/1.txt -sv
* About to connect() to examplebucket1-1259222427.file.myqcloud.com port 443 (#0)
*   Trying 101.69.121.89...
* Connected to examplebucket1-1259222427.file.myqcloud.com (101.69.121.89) port 443 (#0)
* Initializing NSS with certpath: sql:/etc/pki/nssdb
*   CAfile: /etc/pki/tls/certs/ca-bundle.crt
  CApath: none
* SSL connection using TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256
* Server certificate:
*       subject: CN=*.weixin.qq.com,O=Shenzhen Tencent Computer Systems Company Limited,L=shenzhen,ST=guangdong,C=CN
*       start date: May 13 08:45:29 2019 GMT
*       expire date: May 13 08:45:29 2020 GMT
*       common name: *.weixin.qq.com
*       issuer: CN=GlobalSign Organization Validation CA - SHA256 - G2,O=GlobalSign nv-sa,C=BE
> GET /fileTest/1.txt HTTP/1.1
> User-Agent: curl/7.29.0
> Host: examplebucket1-1259222427.file.myqcloud.com
> Accept: */*
>
< HTTP/1.1 200 OK
< Date: Wed, 11 Dec 2019 09:32:36 GMT
< Content-Type: text/plain
< Content-Length: 258
< Connection: keep-alive
< Server: NWS_TCloud_S1
< Cache-Control: max-age=600
< Expires: Wed, 11 Dec 2019 09:42:36 GMT
< Last-Modified: Wed, 11 Dec 2019 09:12:12 GMT
< X-NWS-LOG-UUID: c95fbff1-e07c-4c06-9368-ce002c157938
< X-Cache-Lookup: Hit From Disktank3
< Accept-Ranges: bytes
<
* Connection #0 to host examplebucket1-1259222427.file.myqcloud.com left intact
```

4. Submit a directory purge task, select **Purge Changed Resources**, and wait for the purge to complete:




5. After the purge is completed, because `Last-Modified` of `1.txt` has been changed, the request will be forwarded to the origin server. As `2.txt` has not been changed, even after a directory purge task is submitted, it will still be hit by nodes and returned:

```
[root@VM_0_14_centos ~]# curl https://examplebucket1-1259222427.file.myqcloud.com/fileTest/1.txt -sv
* About to connect() to examplebucket1-1259222427.file.myqcloud.com port 443 (#0)
*   Trying 101.71.72.212...
* Connected to examplebucket1-1259222427.file.myqcloud.com (101.71.72.212) port 443 (#0)
* Initializing NSS with certpath: sql:/etc/pki/nssdb
*   CAfile: /etc/pki/tls/certs/ca-bundle.crt
  CApath: none
* SSL connection using TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256
* Server certificate:
*       subject: CN=*.weixin.qq.com,O=Shenzhen Tencent Computer Systems Company Limited,L=shenzhen,ST=guangdong,C=CN
*       start date: May 13 08:45:29 2019 GMT
*       expire date: May 13 08:45:29 2020 GMT
*       common name: *.weixin.qq.com
*       issuer: CN=GlobalSign Organization Validation CA - SHA256 - G2,O=GlobalSign nv-sa,C=BE
> GET /fileTest/1.txt HTTP/1.1
> User-Agent: curl/7.29.0
> Host: examplebucket1-1259222427.file.myqcloud.com
> Accept: */*
>
< HTTP/1.1 200 OK
< Date: Wed, 11 Dec 2019 09:43:10 GMT
< Content-Type: text/plain
< Content-Length: 254
< Connection: keep-alive
< Server: tencent-cos
< Last-Modified: Wed, 11 Dec 2019 09:40:37 GMT
< X-NWS-UUID-VERIFY: 965fe357269927d4fde83e5011335643
< Accept-Ranges: bytes
< ETag: "ba792676560655b3bbaf4e09f642c547"
< x-cos-request-id: NWRmMGJhMmVfNWJiMjU4NjRfM2I1NF85NmQ1ZDA=
< X-Daa-Tunnel: hop_count=4
< X-NWS-LOG-UUID: e1318191-923d-4544-b759-b298b1ef8897
< X-Cache-Lookup: Hit From Upstream
< X-Cache-Lookup: Hit From Inner Cluster
< X-Cache-Lookup: Hit From Upstream
< X-Cache-Lookup: Hit From Inner Cluster
<
* Connection #0 to host examplebucket1-1259222427.file.myqcloud.com left intact
```

```
[root@VM_0_14_centos ~]# curl https://examplebucket1-1259222427.file.myqcloud.com/fileTest/2.txt -sv
* About to connect() to examplebucket1-1259222427.file.myqcloud.com port 443 (#0)
*   Trying 101.69.121.120...
* Connected to examplebucket1-1259222427.file.myqcloud.com (101.69.121.120) port 443 (#0)
* Initializing NSS with certpath: sql:/etc/pki/nssdb
*   CAfile: /etc/pki/tls/certs/ca-bundle.crt
  CApath: none
* SSL connection using TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256
* Server certificate:
*       subject: CN=*.weixin.qq.com,O=Shenzhen Tencent Computer Systems Company Limited,L=shenzhen,ST=guangdong,C=CN
*       start date: May 13 08:45:29 2019 GMT
*       expire date: May 13 08:45:29 2020 GMT
*       common name: *.weixin.qq.com
*       issuer: CN=GlobalSign Organization Validation CA - SHA256 - G2,O=GlobalSign nv-sa,C=BE
> GET /fileTest/2.txt HTTP/1.1
> User-Agent: curl/7.29.0
> Host: examplebucket1-1259222427.file.myqcloud.com
> Accept: */*
>
< HTTP/1.1 200 OK
< Date: Wed, 11 Dec 2019 09:44:24 GMT
< Content-Type: text/plain
< Content-Length: 135
< Connection: keep-alive
< Server: nws_ocmid_hy
< Cache-Control: max-age=600
< Expires: Wed, 11 Dec 2019 09:54:24 GMT
< Last-Modified: Wed, 11 Dec 2019 09:12:18 GMT
< X-NWS-UUID-VERIFY: 77063706e00075a84cdf6d5f5c4ff03f
< X-NWS-LOG-UUID: b639cf12-0f1c-4908-9978-c8f9fe70e494
< X-Cache-Lookup: Hit From Disktank3
< Accept-Ranges: bytes
< X-Daa-Tunnel: hop_count=3
< X-Cache-Lookup: Hit From Inner Cluster
< X-Cache-Lookup: Hit From Upstream
< X-Cache-Lookup: Hit From Inner Cluster
<
* Connection #0 to host examplebucket1-1259222427.file.myqcloud.com left intact
```

# Certificate Management

Last updated：2021-08-05 14:52:52

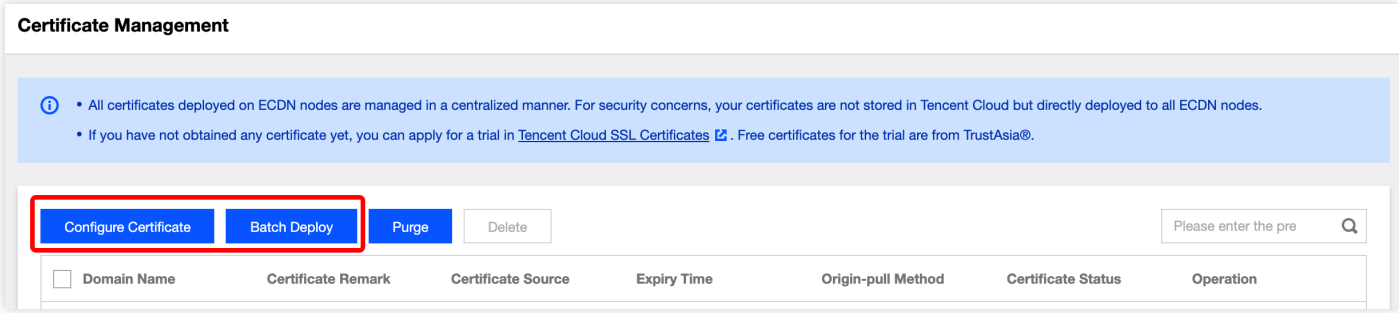
You can configure HTTPS certificates for domain names connected to ECDN. ECDN supports configuration of existing certificates or certificates hosted or issued in the SSL Certificates Service Console.

Note：
If your application has been migrated to the CDN console, you can go to the console for operation by referring to Content Delivery Network.

## Certificate Management List

Log in to the ECDN Console and click **Certificate Management** on the left sidebar to enter the list page where you can:

- View basic HTTPS configuration information of domain names, such as certificate source, expiration time, origin-pull method, and deployment status.
- Deploy certificates by domain name. For detailed directions, please see Configuring Certificate below.
- Deploy domain name certificates in batches. For detailed directions, please see Batch Deployment below.
- Edit or delete HTTPS configuration.




## Configuring Certificate

On the domain management page, click **Configure Certificate** to enter the management page and deploy a certificate in the following steps:

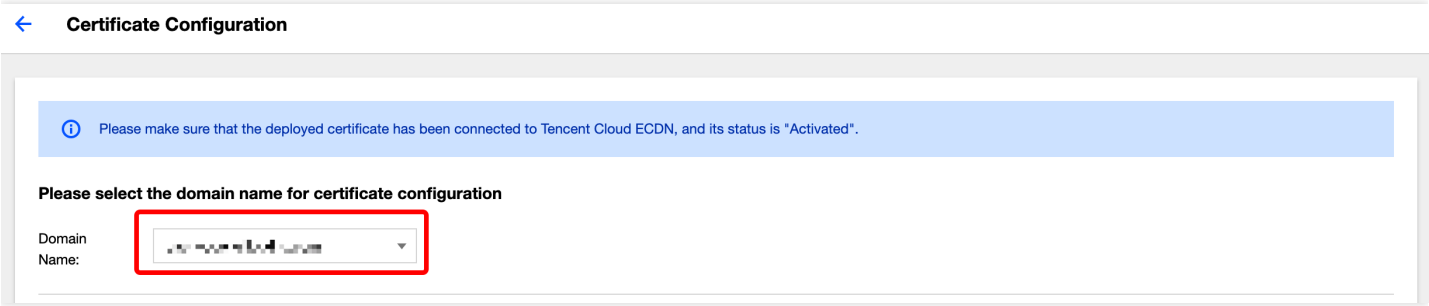
1. Select a domain name

2. Associate the domain name with the certificate
3. Submit for deployment

## Selecting domain name

In the **Domain Name** drop-down list, select the domain name for which to configure a certificate.

> Note：
> The domain name should already have been connected to ECDN, and the domain name status should be **activated**. Certificates cannot be configured for **deactivated** or **deploying** domain names.

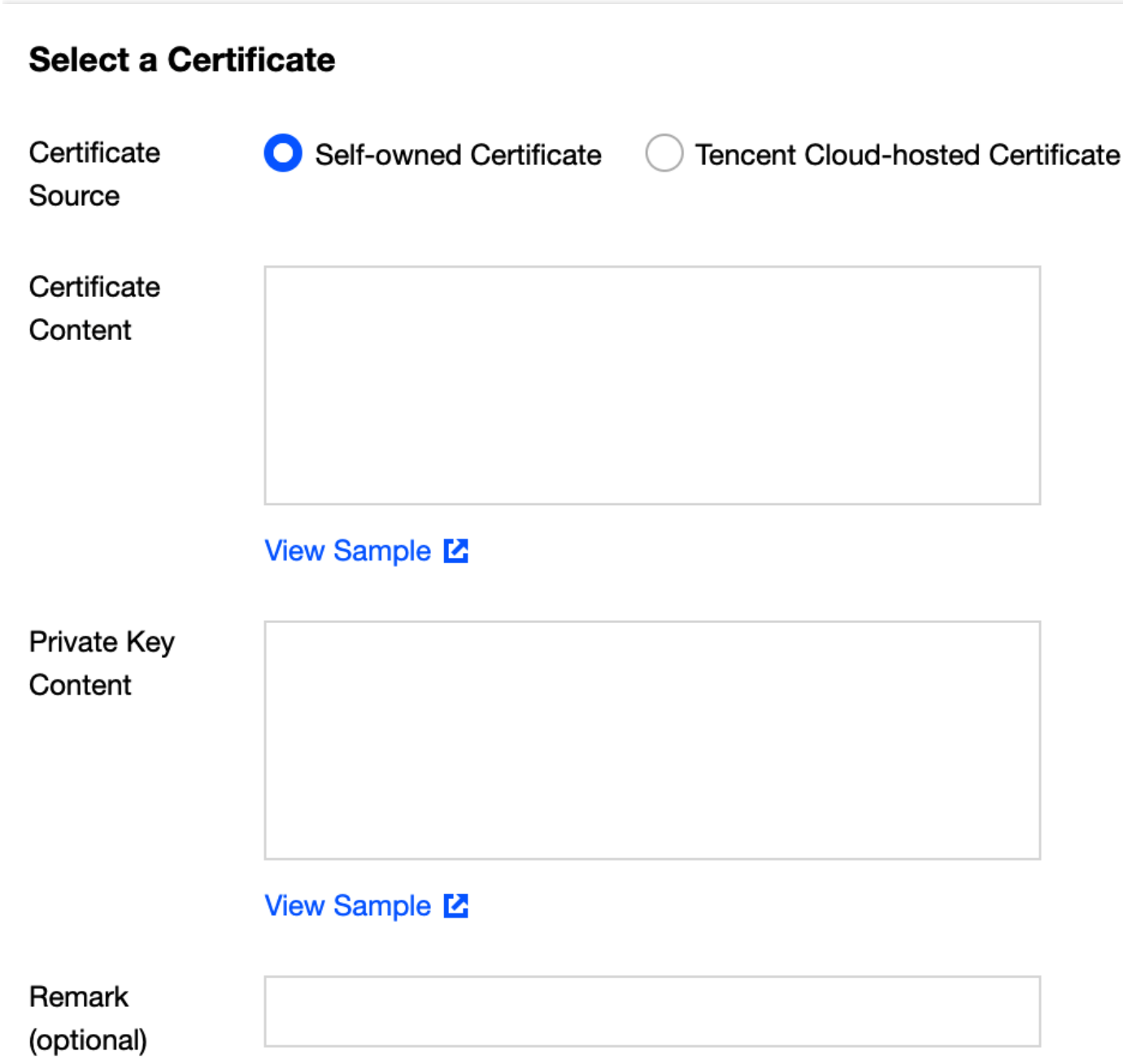



## Associating domain name with certificate

After selecting a domain name, you need to configure it with a certificate. ECDN supports configuration of private and Tencent Cloud-hosted certificates. You can choose an appropriate certificate based on your selected domain name. Directions for configuring these two types of certificates are detailed as below:

| Certificate Source Type | Configuration Steps | Remarks |
| --- | --- | --- |
| Private certificate | You need to paste certificate content and private key content into the text box and add remarks for certificate identification. | The certificate content must be in PEM format. For more information, please see Private Certificate Configuration Guide. |

| Certificate Source Type | Configuration Steps | Remarks |
| --- | --- | --- |
| Tencent Cloud-hosted certificate | You can select an appropriate Tencent Cloud-hosted certificate in the certificate drop-down list. | You can log in to the SSL Certificates Service Console to apply for a certificate free of charge or host a private certificate in Tencent Cloud. |




### Submitting for deployment

Click **Deploy** to submit the task. You can view the certificate deployment status on the **Certificate Management** page.

- When a domain name certificate is added or deleted, the certificate status will be displayed as **deploying**, and the deployment usually takes 5 minutes to take effect. You can click **Refresh** to view the certificate deployment status.
- The domain name certificate deployment features seamless overwriting; therefore, modification of domain name certificate configuration will not cause any disruption to your business.

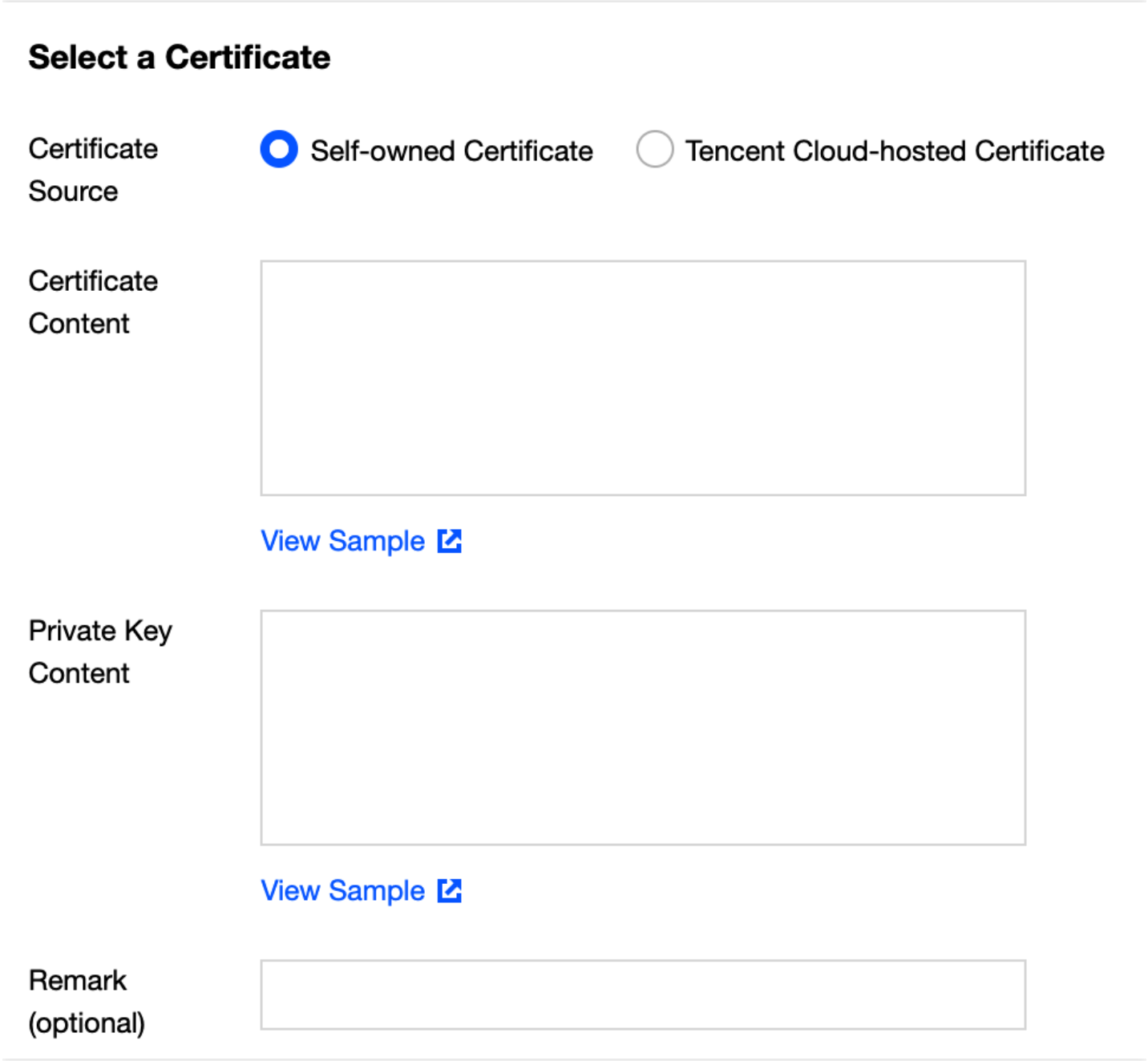
# Batch Deployment

If your submitted certificate is associated with multiple acceleration domain names, you can manage their certificate configurations in a unified manner through batch deployment in the following steps:

1. Select a certificate
2. Associate domain names
3. Submit for deployment

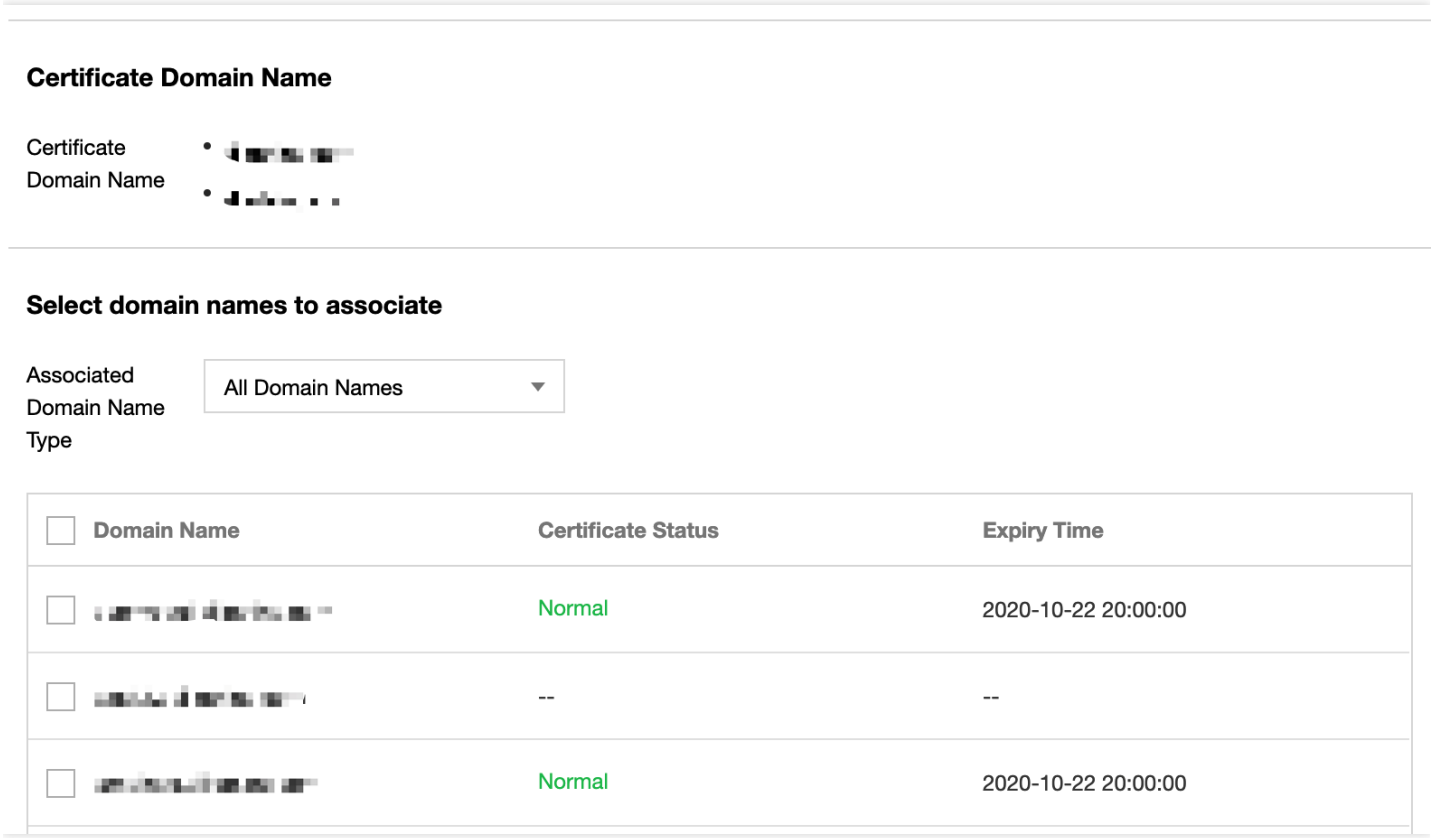
### Selecting certificate

You can select a multi-domain name certificate or wildcard certificate when using batch deployment. For detailed directions, please see Certificate Configuration Steps.




### Associating domain names

After a certificate is selected, the system will automatically associate the certificate domain name with an ECDN acceleration domain name. You can also filter domain name certificates by their deployment status to quickly select domain names that need to be configured with the certificate.




### Submitting for deployment

After the configuration is completed, click **submit** to submit it. You can go to the certificate management list to view the certificate configuration status.

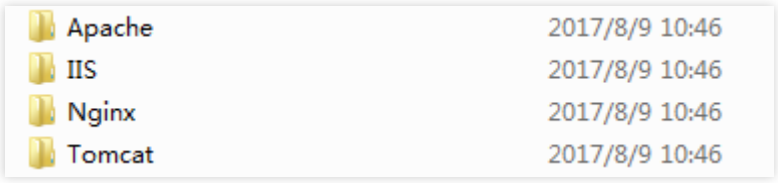
- When a domain name certificate is added or deleted, the certificate status will be displayed as **deploying**, and the deployment usually takes 5 minutes to take effect. You can click **Refresh** to refresh the certificate deployment status.
- The domain name certificate deployment features seamless overwriting; therefore, modification of domain name certificate configuration will not cause any disruption to your business.

## Private Certificate Management Description

### Certificate and private key

1. If you need to configure your domain name with an existing certificate, please read this section. If you need to configure a certificate hosted or issued in the SSL Certificates Service Console, you can skip this step and directly view the certificate configuration process below.

The certificates provided by CAs include the following types, of which **Nginx** is used by ECDN.




2. Go to the Nginx folder and open ".crt" (certificate) and ".key" (private key) files with a text editor to view the content of the certificate and private key in PEM format.


3. Certificate description
   - Common certificate extensions include ".pem", ".crt", and ".cer". Open the certificate file in a text editor and you can see content similar to the one shown below.
     A .pem certificate begins with "-----BEGIN CERTIFICATE-----" and ends with "-----END CERTIFICATE-----". Every line in between contains 64 characters, while the last line may have less than 64 characters.


   - If your certificate is issued by an intermediate CA, your certificate file will consist of multiple certificates. In this case, you need to splice the server certificates and intermediate certificates manually for upload by putting the

server certificate content before the intermediate certificate content without any blank lines in between. Please refer to the rules or instructions that came with the certificate.

> Note：
>
> - There should be no blank lines between the certificates.
> - All certificates are in PEM format.

- A certificate chain from an intermediate CA comes in this format:

```
-----BEGIN CERTIFICATE-----
-----END CERTIFICATE-----
-----BEGIN CERTIFICATE-----
-----END CERTIFICATE-----
-----BEGIN CERTIFICATE-----
-----END CERTIFICATE-----
```

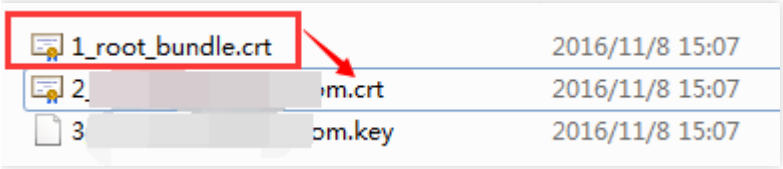
4. Private key description
   - Common private key extensions include ".pem" and ".key". Open a private key file in a text editor and you will see a certificate similar to the content as shown below.
     - A .pem private key begins with "-----BEGIN RSA PRIVATE KEY-----" and ends with "-----END RSA PRIVATE KEY-----". Every line in between contains 64 characters, while the last line may have less than 64 characters.


- If your private key begins with "-----BEGIN PRIVATE KEY-----" and ends with "-----END PRIVATE KEY-----", you are recommended to convert the format by using OpenSSL with the following command:

```
openssl rsa -in old_server_key.pem -out new_server_key.pem
```

## Completing certificate chain

When configuring a private certificate, you may encounter a problem where the **certificate chain cannot be completed**. In this case, you can paste the CA-issued certificate (in PEM format) after the domain name certificate (in PEM format) to complete the certificate chain. You can also submit a ticket for assistance.




## Converting certificate format

Currently, ECDN only supports certificates in PEM format. Certificates in other formats need to be converted to PEM format first. You are recommended to use OpenSSL to perform the conversion. The following shows how to convert several common formats to PEM.

### DER to PEM

The DER format is generally used on Java platforms.

- Certificate conversion

```
openssl x509 -inform der -in certificate.cer -out certificate.pem
```

- Private key conversion

```
openssl rsa -inform DER -outform PEM -in privatekey.der -out privatekey.pem
```

### P7B to PEM

The P7B format is generally used on Windows Server and Tomcat.

- Certificate conversion

```
openssl pkcs7 -print_certs -in incertificat.p7b -out outcertificate.cer
```

  Open `outcertificat.cer` with a text editor to view the content of the PEM certificate.

- Private key conversion

  Private keys can generally be exported on IIS servers.

### PFX to PEM

The PFX format is generally used on Windows Server.

- Certificate conversion

```
openssl pkcs12 -in certname.pfx -nokeys -out cert.pem
```

- Private key conversion

```
openssl pkcs12 -in certname.pfx -nocerts -out key.pem -nodes
```

# Log Management

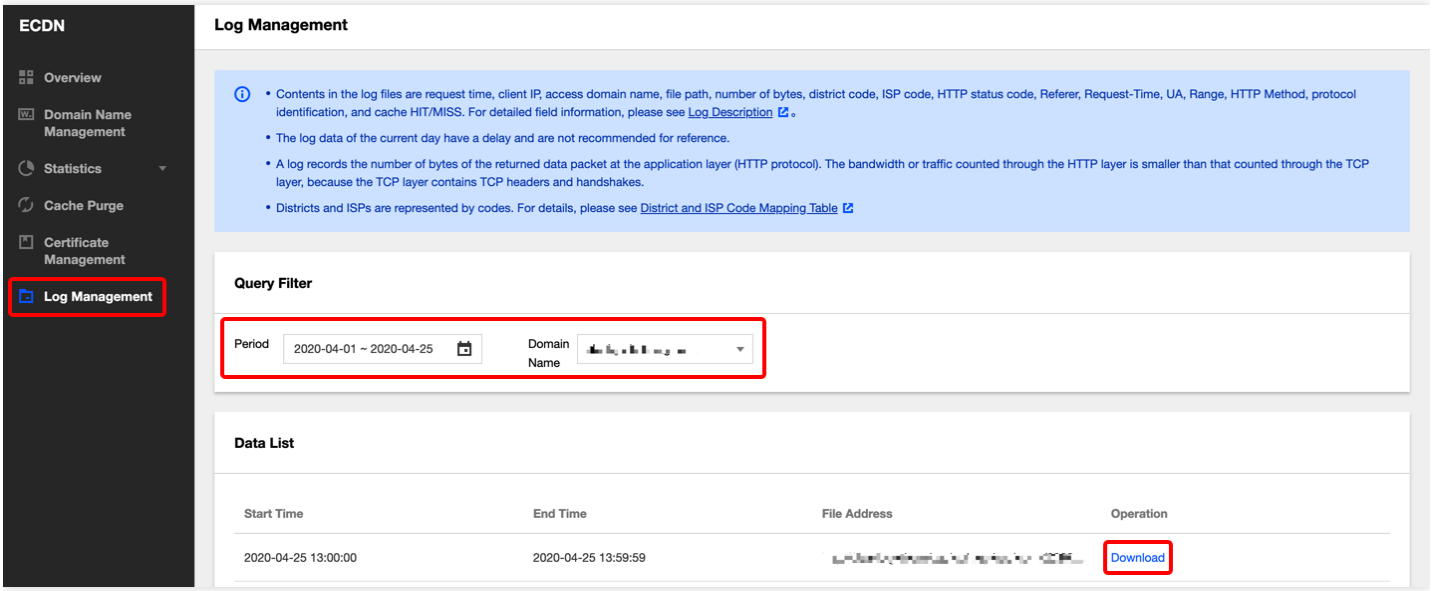
Last updated：2021-08-05 14:57:12

You can download the detailed logs of user access to your connected domain names for the last 40 days for analysis, which are recorded hourly.

Note：
If your application has been migrated to the CDN console, you can go to the console for operation by referring to Content Delivery Network.

## Downloading Logs

Log in to the ECDN Console and select **Log Management** on th left sidebar. Select the domain for which you want to check logs and the time period. Then, click **OK** to get the log download link.




No access logs will be generated for the queried time period in which there is no request received, and you will see **No Data** on the page.

Note：

- By default, the ECDN logs requests on an hourly basis, that is, there can be 24 log files generated per day. No logs will be generated for the hour in which there is no request received.

- ECDN logs can be delayed by approximately 30 minutes.

# Log Field Description

Decompress the downloaded log data packages and view the log files in text format. The fields are separated by space. Below is an example:

```
20170719174306 10.10.10.10 www.test.com /test.png 77487 3 2 0 NULL 1408 "Mozilla/
20170719174407 10.10.10.10 www.test.com /test2.png 72488 5 2 200 NULL 13569 "Mozi
20170719174520 10.10.10.10 www.test.com /test3.png 74864 4 2 200 NULL 9474 "Mozil
20170719174544 10.10.10.10 www.test.com /test4.png 81453 2 2 200 NULL 9218 "Mozil
20170719174532 10.10.10.10 www.test.com /test5.png 54678 7 2 200 NULL 9041 "Mozil
```

The corresponding fields (from left to right) and their descriptions in a log are as shown below:

| Order | Log Content |
| --- | --- |
| 1 | Request time |
| 2 | IP of the client accessing the domain name |
| 3 | Accessed domain name |
| 4 | File request path |
| 5 | Number of bytes of this access request |
| 6 | District (for the district codes, please see **District mappings** below) |
| 7 | ISP (for the district codes, please see **ISP mappings** below) |
| 8 | HTTP status code |
| 9 | Referer information |
| 10 | Response time in milliseconds |
| 11 | User-Agent information |
| 12 | Range parameter |
| 13 | HTTP Method |
| 14 | HTTP protocol identifier |

| Order | Log Content |
| --- | --- |
| 15 | Cache hit/miss (all resources are not cached in dynamic acceleration by default) |

### Region mappings

1: North China; 2: Northwest China; 3: Northeast China; 4: East China; 5: Central China; 6: Southwest China; 7: South China; 8: outside Mainland China.

### District mappings

22: Beijing; 86: Inner Mongolia; 146: Shanxi; 1069: Hebei; 1177: Tianjin; 119: Ningxia; 152: Shaanxi; 1208: Gansu; 1467: Qinghai; 1468: Xinjiang; 145: Heilongjiang; 1445: Jilin; 1464: Liaoning; 2: Fujian; 120: Jiangsu; 121: Anhui; 122: Shandong; 1050: Shanghai; 1442: Zhejiang; 182: Henan; 1135: Hubei; 1465: Jiangxi; 1466: Hunan; 118: Guizhou; 153: Yunnan; 1051: Chongqing; 1068: Sichuan; 1155: Tibet; 4: Guangdong; 173: Guangxi; 1441: Hainan; 0: Other; 1: Hong Kong, Macao, and Taiwan; -1: outside Mainland China.

### ISP mappings

2: China Telecom; 26: China Unicom; 38: CERNET; 43: Great Wall Broadband Network; 1046: China Mobile; 3947: China Mobile Tietong; -1: ISP outside Mainland China; 0: Other ISPs.

## Precautions

The bandwidth or traffic data recorded in logs is the returned data at the application layer (HTTP protocol), which is smaller than that calculated at the TCP layer due to such factors as TCP protocol packet loss, three-way handshake, and retransmission.

## Downloading ECDN Logs Outside China

At present, ECDN outside Mainland China is in beta test. If you have enabled it, you can submit a ticket to apply for the log service.