

# **API Gateway**

## **FAQs**

### **Product Documentation**



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# FAQs

## Billing

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### **Is API Gateway a paid service?**

Billing for API Gateway started at 23:59:59, February 13, 2020. Please [top up](#) your Tencent Cloud account in time in order to avoid potential service suspension. For more information, please see [Billing Overview](#).

### **What is the billing cycle for API Gateway?**

API Gateway is billed on an hourly basis. Tencent Cloud generates hourly bills for API calls, typically within 30 minutes after the end of the current billing cycle.

### **How is traffic of less than 1 GB charged?**

If you consume billable traffic of 1 GB and 200 MB within one hour, the system will automatically convert the traffic of 200 MB to GB for billing ( $1 \text{ GB and } 200 \text{ MB} = 1 + 200/1024 = 1.1953 \text{ GB}$ ) based on which traffic fees for the hour will be calculated.

### **Is it normal if multiple bills are generated on an hourly basis?**

It is normal if multiple bills are generated for one hour, as API Gateway is billed in a tiered manner. If multiple tiers are hit within one hour, then multiple bills will be generated separately.

### **Is API Gateway billed separately in different regions?**

API Gateway is billed based on two metrics: the number of calls and traffic. The number of calls is billed at the same price in all regions, while the traffic is billed at different prices in different regions. For detailed prices, please see [Billing Overview](#).

### **What should I do if I have doubt about any bill?**

If you have doubt about any bill, please see [Billing Overview](#) for more information on how API Gateway is billed, and view the billing details in the [Billing](#) section in the console.

In addition, the usage information pushed on an hourly basis for the last 30 days is retained on the backend of API Gateway, and you can ask technical support for details by [submitting a ticket](#).

# Console

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## How do I determine the backend URL based on the backend path?

If the incoming request is `/release/apia/20171012/index.html` and the API with the path of `/apia/` is hit, then:

- If the backend path is an empty string, the URL transferred to the backend will be `/apia/20171012/index.html` ;
- If the backend path is `/endpoint/` , `/apia/` will be cut off and the remainder will be pasted after the backend path to form `/endpoint/20171012/index.html` .

## How do I determine the API hit priority?

- If the API path starts with `=` , it will have the highest priority, and exact match will be used.
- If the API path starts with `^~` , it will have the second priority and cannot contain regular expressions, and prefix match will be used.
- If the API path is a regular expression including path variables, it has the third priority.
- If the API path is a normal string, the longest string will have the highest priority, and longest match will be used.

## How do I configure API Gateway to support CORS?

When creating an API, if you select "Support CORS", then API Gateway will support cross-origin requests. The default configuration is as follows:

```
#define CORS_DEFAULT_AC_ALLOW_ORIGIN ("*")

#define CORS_DEFAULT_AC_ALLOW_METHODS ("GET, POST, PUT, DELETE, HEAD, OPTIONS, PATCH")

#define CORS_DEFAULT_AC_ALLOW_CREDENTIALS ("true")

#define CORS_DEFAULT_AC_ALLOW_HEADERS ("X-API-ID, X-Service-RateLimit, X-UsagePlan-RateLimit, X-UsagePlan-Quota, Cache-Control, Connection, Content-Disposition, Date, Keep-Alive, Pragma, Via, Accept, Accept-Charset, Accept-Encoding, Accept-Language, Authorization, Cookie, Expect, From, Host, If-Match, If-Modified-Since, If-None-Match, If-Range, If-Unmodified-Since, Range, Origin, Referer, User-Agent, X-Forwarded-For, X-Forwarded-Host, X-Forwarded-Proto, Accept-Range, Age, Content-Range, Content-Security-Policy, ETag, Expires, Last-Modified, Location, Server, Set-Cookie, Trailer, Transfer-Encoding, Vary, Allow, Content-Encoding, Content-Language, Content-Length, Content-Location, Content-Type")

#define CORS_DEFAULT_AC_EXPOSE_HEADERS (CORS_DEFAULT_AC_ALLOW_HEADERS)
```

```
#define CORS_DEFAULT_AC_MAX_AGE ("86400")
```

## What should I do if an API request fails?

After you create an API service, if calls to it often fail with the following prompt returned:

```
{"message": "There is no api match uri[/api/v1/tool/123/ico] host [service-asoj98o0-1251762227.ap-guangzhou.apigateway.myqcloud.com]"}
```

Check whether the API service has been published in an environment.

A created API service can be called only after it is published in an environment. If it is modified, it won't take effect until it is published again.

If a service is published in different environments, the default call address should contain the environment name, such as:

```
service-asoj98o0-1251762227.ap-guangzhou.apigateway.myqcloud.com/release/user path
```

# 504 Error Solution

Last updated : 2020-07-09 17:45:23

## What should I do if "504 Gateway Time-out" is displayed in logs when I call the API Gateway service?

If "504 Gateway Time-out" is displayed in logs when you call the API Gateway service, you can troubleshoot the problem in the following ways:

### Check whether the API Gateway backend service can be directly accessed

- If the backend service is HTTP-based and is not in any VPC, you can access it over the public network to check whether the access times out.
- If the backend service is a CLB resource in a VPC, access the private IP of the CLB instance from another CVM instance in the same VPC to check whether the access times out.
- If the backend service is TSF, you can access the timed-out instance through another service instance in the same namespace under TSF to check whether the access times out.

If the access still times out in the above tests, the backend service may have problems. In this case, you are recommended to check whether it is normal.

### Check the timeout period set in API Gateway and the backend service

When configuring an API in API Gateway, you need to add the timeout period in the backend configuration. If the backend service fails to return the result in the specified timeout period, the gateway will return the 504 error.

### Check whether the security group is set correctly

- If the backend address points to a CLB instance in a VPC, check whether the CVM security group bound to the CLB instance opens the API Gateway IP. If no security group is set, please check whether there are other port and network limits for the backend address.  
Open IP in a security group: the backend CVM security group bound to the CLB instance needs to open the API Gateway private IP range. For private IP ranges in different regions, please see [Private IP Ranges and Public VIPs of API Gateway in Different Regions](#). The port of the service deployed on the CVM instance also needs to be opened. For more information on how to set the security group, please see [Security Group Operations](#).
- If your API is a microservice API, and the service is deployed on a CVM instance, you need to open the client IP and service port in the security group on the CVM instance.
- If your API is a microservice API, and the service is deployed in a container, as the container pod may not be fixed to a CVM instance, you are recommended to configure the same security group

for all servers in the cluster and open the client IP and container port in the security group.

- If your backend address is a general HTTP address that can be accessed over the internet, you also need to check whether the firewall and security group are set and open the gateway public VIP.

As the public VIP and private IP range of API Gateway may change, you are recommended to use key pair authentication to ensure request security.



# HTTP Error Codes

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## What are the common errors when API Gateway is called?

When you call API Gateway, you may encounter the following common HTTP error codes:

### Frontend errors:

Error Code	Log Message	Description
401	HMAC apikey is invalid for API.	<code>APIKey</code> is not bound to this API.
401	HMAC signature cannot be verified, a valid x-date header is required for HMAC Authentication.	HMAC authentication does not include <code>x-date</code> in the header, or the HMAC value is invalid.
401	HMAC signature cannot be verified, the x-date header is out of date for HMAC Authentication.	The <code>x-date</code> timestamp timed out. It is 900s by default.
401	HMAC signature cannot be verified, a valid date or x-date header is required.	If there is no <code>x-date</code> , the header must contain <code>date</code> .
401	HMAC id or signature missing.	The ID or signature field is missing in <code>Authorization</code> .
401	HMAC do not support multiple HTTP header.	A header with multiple values is not supported.
401	HMAC signature cannot be verified, a valid xxx header is required.	xxx header is missing in the request.
401	HMAC algorithm xxx not supported.	HMAC algorithm does not support xxx, which currently supports HMAC-SHA1, HMAC-SHA256, HMAC-SHA384, and HMAC-SHA512.
401	HMAC authorization format error.	Incorrect <code>Authorization</code> format.

Error Code	Log Message	Description
401	HMAC authorization headers is invalidate.	<code>Authorization</code> lacks sufficient parameters. For more information, please see <a href="#">Key Pair Authentication - Eventually Delivered Content</a> .
401	HMAC signature cannot be verified.	Unable to verify the signature, possibly because the <code>APIKey</code> cannot be recognized. This usually happens if the <code>APIKey</code> is not bound to this service or API.
401	HMAC signature does not match.	The signature does not match.
401	Oauth call authentication server fail.	Failed to call the authentication server.
401	Oauth found no related Oauth api.	As the associated Oauth authentication API is not found, the <code>id_token</code> cannot be verified.
401	Oauth miss Oauth id_token.	The <code>id_token</code> is missing in the request.
401	Oauth signature cannot be verified, a validate authorization header is required.	Authentication header missing.
401	Oauth authorization header format error.	Incorrect Oauth header format.
401	Oauth found no authorization header.	Authentication header not found.
401	Oauth found no id_token.	<code>id_token</code> not found.
401	Oauth id_token verify error.	JWT-formatted <code>id_token</code> verification failed.
403	Found no validate usage plan.	No corresponding usage plan found. Access denied. (This error may occur if the usage plan feature is enabled.)
403	Cannot identify the client IP address, unix domain sockets are not supported.	Unable to identify the source IP.
403	Endpoint IP address is not allowed.	The backend IP is not allowed to access.

Error Code	Log Message	Description
403	Get xxx params fail.	An error occurred while getting parameters from the request.
403	need header Sec-WebSocket-Key.	The <code>Sec-WebSocket-Key</code> header is missing in the actual request, which will be checked for APIs configured with WebSocket.
403	need header Sec-WebSocket-Version.	The <code>Sec-WebSocket-Version</code> header is missing in the actual request, which will be checked for APIs configured with WebSocket.
403	header xxx is required.	The xxx header is missing in the actual request.
403	path variable xxx is required.	The <code>{xxx}</code> path variable is configured but does not match the actual request path.
403	querystring xxx is required.	The xxx querystring is missing in the actual request.
403	req content type need application/x-www-form-urlencoded.	Requests with the <code>body</code> parameter must be in form format.
403	body param xxx is required.	The xxx body parameter is missing in the actual request.
404	Not found micro service with key.	No corresponding microservice found.
404	Not Found Host.	The request should have the <code>host</code> field, whose value should be the server's domain name in string type.
404	Get Host Fail.	The value of the <code>host</code> field in the request is not in string type.
404	Could not support method.	This request method type is not supported.
404	There is no api match host[\$host].	Request server domain name/address not found.
404	There is no api match env_mapping[\$env_mapping].	The <code>env_mapping</code> field after the custom domain name is incorrect.

Error Code	Log Message	Description
404	There is no api match default env_mapping[\$env_mapping].	The value of the <code>env_mapping</code> field after the default domain name should be <code>test/prepub/release</code> .
404	There is no api match uri[\$uri].	The API that matches the URI is not found in the service corresponding to the request address.
404	Not allow use HTTPS protocol or Not allow use HTTP protocol.	The service corresponding to the requested address does not support the HTTP protocol type.
404	Found no api.	The request did not match an API.
405	Method Not Allowed.	HTTP request method not allowed
426	Not allow use HTTPS protocol.	HTTPS protocol not allowed.
426	Not allow use HTTPS protocol.	HTTP protocol not allowed.
426	Not allow use HTTPS protocol.	xxx protocol not allowed.
429	API rate limit exceeded.	The request rate limit is exceeded. The current rate can be viewed through the request header.
429	API quota exceeded.	The configuration quota is exceeded. Remaining quota can be viewed through the request header.
429	req is cross origin, api \$uri need open cors flag on qcloud apigateway.	This is a cross-origin request, but the corresponding API has not enabled cross-origin access.
481	API config error.	API configuration error.
481	TSF config error.	TSF configuration error.
481	Get location of micro service info fail.	Microservice name and namespace are not configured to get location.
481	Only support the map_from like method.req.{path}.{}	Microservice name and namespace are configured to get location, but the location format is invalid.
481	Found no valid cors config.	CORS configuration error.
481	Oauth public key error.	Public key certificate configuration error.
481	Oauth id_token location forbidden.	Forbidden <code>id_token</code> storage location.

Error Code	Log Message	Description
481	Oauth found no oauth config.	Oauth configuration not found.
481	Oauth found no public key.	Public key not found.
481	Mock config error.	Mock configuration error.
499	Client closed connetion.	The client closed connection.

**Backend errors:**

Error Code	Log Message	Description
500	Error occurred during query params.	An error occurred while querying parameters.
500	Internal Server Error.	<ol style="list-style-type: none"><li>1. Other APIGW internal logic error.</li><li>2. If the API is proxy type, accessing the backend address without access permission will also cause this error.</li></ol>
502	Bad Gateway.	Backend service connection error. Possible reasons: <ol style="list-style-type: none"><li>1. The backend denied the service, and the 502 error occurred for all requests.</li><li>2. Backend load was too high, and the 502 error occurred for some requests.</li></ol>
504	Gateway Time-out.	Backend server connection timed out.