

API Gateway

API Reference

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1 Before You Start

[Overview](#)

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1.1 Overview

API Gateway is a high-performance, high-availability, and high-security API hosting service that helps enterprises build, manage, and deploy Application Programming Interfaces (APIs) at any scale.

This document describes how to use REST APIs to perform operations on API Gateway, such as creating, deleting, and modify your own APIs.

If you plan to access API Gateway through APIs, ensure that you are familiar with API Gateway concepts. For details, see the *User Guide*.

1.2 API Calling

API Gateway supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For details about API calling, see [Calling APIs](#).

1.3 Endpoints

An endpoint is the request address for calling an API. Endpoints vary depending on services and regions. For the endpoints of all services, see [Regions and Endpoints](#).

1.4 Constraints

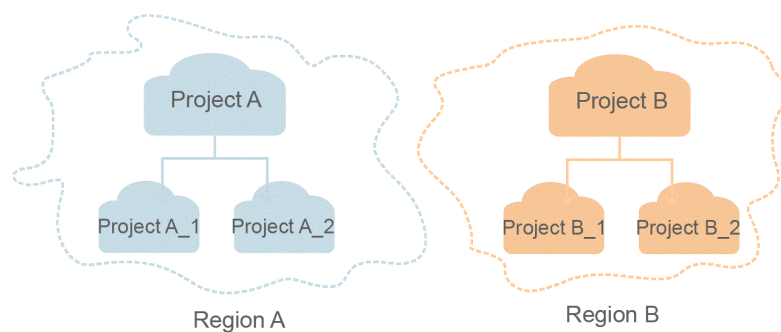
- The number of API Gateway resources that you can create is determined by your quota. To increase your quota, contact technical support.

- For more constraints, see API description.

1.5 Concepts

- Account
An account is created upon successful registration with the cloud system. The account has full access permissions for all of its cloud services and resources. It can be used to reset user passwords and grant user permissions. The account is a payment entity and should not be used directly to perform routine management. For security purposes, create IAM users and grant them permissions for routine management.
- IAM user
An IAM user is created using an account to use cloud services. Each IAM user has its own identity credentials (password and access keys).
An IAM user can view the account ID and user ID on the **My Credentials** page of the console. The account name, username, and password will be required for API authentication.
- Region
Regions are geographic areas isolated from each other. Resources are region-specific and cannot be used across regions through internal network connections. For low network latency and quick resource access, select the nearest region.
- AZ
AZs are physically isolated locations in a region, but are interconnected through an internal network for enhanced application availability.
- Project
Projects group and isolate resources (including compute, storage, and network resources) across physical regions. A default project is provided for each region, and subprojects can be created under each default project. Users can be granted permissions to access all resources in a specific project. For more refined access control, create subprojects under a project. Users can then be assigned permissions to access only specific resources in the subprojects.

Figure 1-1 Project isolating model



2 Calling APIs

[Making an API Request](#)

[Authentication](#)

[Response](#)

2.1 Making an API Request

This section describes the structure of a REST API request, and uses the IAM API for obtaining a user token as an example to demonstrate how to call an API. The obtained token can then be used to authenticate the calling of other APIs.

Request URI

A request URI is in the following format:

{URI-scheme} :// {Endpoint} / {resource-path} ? {query-string}

Although a request URI is included in the request header, most programming languages or frameworks require the request URI to be transmitted separately.

- **URI-scheme:**
Protocol used to transmit requests. All APIs use HTTPS.
- **Endpoint:**
Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. For details about how to obtain endpoints, see [Endpoints](#).
- **resource-path:**
Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the **resource-path** of the API used to obtain a user token is **/v3/auth/tokens**.
- **query-string:**
Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of "*Parameter name=Parameter value*". For example, **?limit=10** indicates that a maximum of 10 data records will be displayed.

 NOTE

To simplify the URI display in this document, each API is provided only with a **resource-path** and a request method. The **URI-scheme** of all APIs is **HTTPS**, and the endpoints of all APIs in the same region are identical.

Request Methods

The HTTP protocol defines the following request methods that can be used to send a request to the server:

- **GET**: requests the server to return specified resources.
- **PUT**: requests the server to update specified resources.
- **POST**: requests the server to add resources or perform special operations.
- **DELETE**: requests the server to delete specified resources, for example, an object.
- **HEAD**: same as GET except that the server must return only the response header.
- **PATCH**: requests the server to update partial content of a specified resource. If the resource does not exist, a new resource will be created.

For example, in the case of the API used to obtain a user token, the request method is POST. The request is as follows:

```
POST https://{{endpoint}}/v3/auth/tokens
```

Request Header

You can also add additional header fields to a request, such as the fields required by a specified URI or HTTP method. For example, to request for the authentication information, add **Content-Type**, which specifies the request body type.

Common request header fields are as follows:

- **Content-Type**: specifies the request body type or format. This field is mandatory and its default value is **application/json**. Other values of this field will be provided for specific APIs if any.
- **X-Auth-Token**: specifies a user token only for token-based API authentication. The user token is a response to the API used to obtain a user token. This API is the only one that does not require authentication.

 NOTE

In addition to supporting token-based authentication, APIs also support authentication using access key ID/secret access key (AK/SK). During AK/SK-based authentication, an SDK is used to sign the request, and the **Authorization** (signature information) and **X-Sdk-Date** (time when the request is sent) header fields are automatically added to the request.

For more information, see [AK/SK-based Authentication](#).

The API used to obtain a user token does not require authentication. Therefore, only the **Content-Type** field needs to be added to requests for calling the API. An example of such requests is as follows:

```
POST https://{{endpoint}}/v3/auth/tokens
Content-Type: application/json
```

Request Body

The body of a request is often sent in a structured format as specified in the **Content-Type** header field. The request body transfers content except the request header.

The request body varies between APIs. Some APIs do not require the request body, such as the APIs requested using the GET and DELETE methods.

In the case of the API used to obtain a user token, the request parameters and parameter description can be obtained from the API request. The following provides an example request with a body included. Replace *username*, *domainname*, ******* (login password), and *xxxxxxxxxxxxxxxxxxxx* (project ID) with the actual values. To learn how to obtain a project ID, see [Obtaining a Project ID](#).

NOTE

The **scope** parameter specifies where a token takes effect. You can set scope to an account or a project under an account. In the following example, the token takes effect only for the resources in a specified project. For more information about this API, see [Obtaining a User Token](#).

```
POST https://{{endpoint}}/v3/auth/tokens
Content-Type: application/json
```

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
          "password": "*****",
          "domain": {
            "name": "domainname"
          }
        }
      }
    },
    "scope": {
      "project": {
        "id": "xxxxxxxxxxxxxxxxxxxx"
      }
    }
  }
}
```

If all data required for the API request is available, you can send the request to call the API through [curl](#), [Postman](#), or coding. In the response to the API used to obtain a user token, **x-subject-token** is the desired user token. This token can then be used to authenticate the calling of other APIs.

2.2 Authentication

Requests for calling an API can be authenticated using either of the following methods:

- Token-based authentication: Requests are authenticated using a token.

Call APIs using endpoints (see [Endpoints](#)) and tokens. This authentication mode is not supported for Object Storage Service (OBS) and Data Ingestion Service (DIS) in the **EU-Paris** region.

- AK/SK-based authentication: Requests are authenticated by encrypting the request body using an AK/SK pair. AK/SK-based authentication is recommended because it provides higher security than token-based authentication. Endpoints can be obtained from [Endpoints](#).

⚠ CAUTION

To call OBS and DIS APIs in the **EU-Paris** region, create a user and generate an AK/SK by referring to [Creating a User and Generating an AK/SK](#), and then call the APIs using endpoints (<https://docs.prod-cloud-ocb.orange-business.com/en-us/endpoint/index.html#>) through AK/SK authentication.

Token-based Authentication

📖 NOTE

The validity period of a token is 24 hours. When using a token for authentication, cache it to prevent frequently calling the IAM API used to obtain a user token.

A token specifies temporary permissions in a computer system. During API authentication using a token, the token is added to requests to get permissions for calling the API.

In [Making an API Request](#), the process of calling the API used to obtain a user token is described. After a token is obtained, the **X-Auth-Token** header field must be added to requests to specify the token when calling other APIs. For example, if the token is **ABCDEFJ....**, **X-Auth-Token: ABCDEFJ....** can be added to a request as follows:

```
POST https://{{endpoint}}/v3/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

AK/SK-based Authentication

📖 NOTE

AK/SK-based authentication supports API requests with a body not larger than 12 MB. For API requests with a larger body, token-based authentication is recommended.

In AK/SK-based authentication, AK/SK is used to sign requests and the signature is then added to the requests for authentication.

- AK: access key ID, which is a unique identifier used in conjunction with a secret access key to sign requests cryptographically.
- SK: secret access key used in conjunction with an AK to sign requests cryptographically. It identifies a request sender and prevents the request from being modified.

In AK/SK-based authentication, you can use an AK/SK to sign requests based on the signature algorithm or use the signing SDK to sign requests. For details about how to sign requests and use the signature SDK, see *API Request Signing Guide*.

NOTICE

- The signing SDK is only used for signing requests and is different from the SDKs provided by services.
- The local time on the client must be synchronized with the clock server to avoid a large offset in the value of the **X-Sdk-Date** request header.
API Gateway checks the time format and compares the time with the time when API Gateway receives the request. If the time difference exceeds 15 minutes, API Gateway will reject the request.

Creating a User and Generating an AK/SK

Step 1 Log in to the API Gateway console.

Step 2 On the top navigation bar, select **EU-Paris**.

Step 3 Choose **Management & Deployment > Identity and Access Management**.

Step 4 On the **Users** page, click **Create User**.

Enter a username, select **Access key** for **Credential Type**, and click **OK**.

Step 5 In the download access key dialog box, click **OK**.

The user is created, and the **credentials.csv** file (AK/SK file) is downloaded.

----End

2.3 Response

Status Code

After sending a request, you will receive a response, including a status code, response header, and response body.

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request. For more information, see [HTTP Status Codes](#).

If status code **201** is returned for calling the API used to obtain a user token, the request is successful.

Response Header

Similar to a request, a response also has a header, for example, **Content-Type**.

Figure 2-1 shows the response header fields for the API used to obtain a user token. The **x-subject-token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

Figure 2-1 Header fields of the response to the request for obtaining a user token

```

connection → keep-alive

content-type → application/json

date → Tue, 12 Feb 2019 06:52:13 GMT

server → Web Server

strict-transport-security → max-age=31536000; includeSubdomains;

transfer-encoding → chunked

via → proxy A

x-content-type-options → nosniff

x-download-options → noopen

x-frame-options → SAMEORIGIN

x-iam-trace-id → 218d45ab-d674-4995-af3a-2d0255ba41b5

x-subject-token
→ MIIYXQYJKoZIhvcNAQcCoIIVTjCCGEoCAQExDTALBgIghkgBZQMEAgEwgharBgkqhkiG9w00BBwGgghacBIIWmHsidG9rZW4iOansiZXhwaXJlc19hdCI6IiwMTktMDItMTNUMC
fj3KJs6YgKnpVNRbW2eZ5eb78SZOkajACgklqO1wi4JIGzrpd18LGXK5bdfq4lqHCYb8P4NaYONYejeAgzVefYtLWT1GSO0zxKZmlQHq82HBqHdglZO9fuEbL5dMhdavj+33wEl
xHRCE9I87o+k9-
j+CMZSEB7bUGd5Uj6eRASXl1jipPEGA270g1FruooL6jggIFkNPQuFSOU8+uSsttVwRtnfsC+qTp22Rkd5MCqFGQ8LcuUxC3a+9CMBnOintWW7oeRUUVhVpxk8pxiX1wTEboX-
RzT6MUbvpGw-oPNFYxJECKnoH3HRozv0vN--n5d6Nbxg==

x-xss-protection → 1; mode=block;

```

(Optional) Response Body

The body of a response is often returned in structured format as specified in the **Content-Type** header field. The response body transfers content except the response header.

The following is part of the response body for the API used to obtain a user token.

```

{
  "token": {
    "expires_at": "2019-02-13T06:52:13.855000Z",
    "methods": [
      "password"
    ],
    "catalog": [
      {
        "endpoints": [
          {
            "region_id": "xxx-north-1",
            .....

```

If an error occurs during API calling, an error code and a message will be displayed. The following shows an error response body.

```

{
  "error_msg": "The format of message is error",
  "error_code": "AS.0001"
}

```

In the response body, **error_code** is an error code, and **error_msg** provides information about the error.

3 Getting Started

Introduction

This section describes how to call an API to register an HTTP API.

For details about how to call APIs, see [Calling APIs](#).

Procedure

1. Call the API mentioned in [Creating an API Group](#) to create an API group.
2. Call the API mentioned in [Registering an API](#) to register an HTTP API.

Registering an HTTP API

- Step 1** Call the API mentioned in [Creating an API Group](#) to create an API group.

```
{
  "name": "APIGroup_test",
  "remark": "Test group"
}
```

Specify the following parameters:

- **name:** API group name
- **remark:** Description of the API group

- Step 2** Call the API registration API to register an HTTP API. For details, see [Registering an API](#).

```
{
  "auth_type": "APP",
  "backend_api": {
    "req_method": "GET",
    "req_protocol": "HTTP",
    "req_uri": "/test/benchmark",
    "timeout": 1000,
    "url_domain": "xx.xx.xx.93:12346"
  },
  "backend_type": "HTTP",
  "group_id": "2b89e73458*****98a828c5eca3b6c3",
  "name": "test",
  "req_method": "GET",
  "req_uri": "/test",
  "type": 1,
  "result_normal_sample": "hello world!"
}
```

Specify the following parameters:

- **auth_type**: Security authentication mode of the API
- **backend_api**: Backend service parameters
 - **req_method**: API request method
 - **req_protocol**: Request protocol of the backend service
 - **req_uri**: Request path of the backend service
 - **timeout**: Timeout interval allowed for API Gateway to request the backend service
 - **url_domain**: Address of the backend service

 **NOTE**

The following reserved IP address segments cannot be used:

- 0.0.0.0/8
 - 10.0.0.0/8
 - 100.125.0.0/16
 - 127.0.0.0/8
 - 169.254.0.0/16
 - 172.16.0.0/12
 - 192.0.0.0/24
 - 192.0.2.0/24
 - 192.88.99.0/24
 - 192.168.0.0/16
 - 198.18.0.0/15
 - 198.51.100.0/24
 - 203.0.113.0/24
 - 224.0.0.0/4
 - 240.0.0.0/4
 - 255.255.255.255/32
- **backend_type**: Type of the backend service
 - **group_id**: ID of the group to which the API belongs. Obtain the group ID by following the instructions in [Querying the API Group List](#).
 - **name**: Name of the API
 - **req_method**: Request method of the API
 - **req_uri**: Access address of the API
 - **type**: Type of the API. **1** means public API.

- **result_normal_sample**: Example response for a successful request
- After registering the API, view it on the API Gateway console.

----End

4 Shared Gateway APIs

- [API Group Management](#)
- [API Management](#)
- [App Management](#)
- [App Authorization Management](#)
- [Environment Management](#)
- [Environment Variable Management](#)
- [Request Throttling Policy Management](#)
- [Binding Request Throttling Policies](#)
- [Excluded Request Throttling Configuration](#)
- [Access Control Policy Management](#)
- [Binding Access Control Policies](#)
- [Querying Subscription Information in the Marketplace](#)
- [Resource Query](#)
- [Signature Key Management](#)
- [Binding Signature Keys](#)
- [Domain Name Management](#)
- [VPC Channel Management](#)
- [OpenAPI](#)
- [Custom Authorizer Management](#)

4.1 API Group Management

4.1.1 Object Model

This section describes the object model for API groups.

 **NOTE**

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of C is mandatory.

Table 4-1 Object model for API groups

Parameter	Data Type	Description	Operation Type	Mandatory
ID	String	API group ID	R	-
NAME	String	API group name	CRU	Yes
STATUS	Integer	Status of the API group, which can be: <ul style="list-style-type: none"> • 1: normal • 2: disabled • 3: deleted Default value: 1 This parameter is not used currently.	R	-
SL_DOMAIN	String	Subdomain name that API Gateway automatically allocates to the API group. The subdomain name cannot be modified.	R	-
SL_DOMAINS	Array of strings	List of subdomain names that API Gateway automatically allocates to the API group. These subdomain names cannot be modified.	R	-
PROJECT_ID	String	ID of the tenant that creates the API group, that is, the owner of the API group	-	-
DOMAIN_NAME	String	Name of the tenant that creates the API group		

Parameter	Data Type	Description	Operation Type	Mandatory
REGISTER_TIME	Timestamp	Time when the API group is created. The value of this parameter is generated by the system by default.	R	-
UPDATE_TIME	Timestamp	Time when the API group was last modified	R	-
REMARK	String	Description of the API group, such as functions and usage	CRU	No
THROTTLE_ID	String	ID of the request throttling policy that controls the number of times APIs in the API group can be accessed within a specified period NOTE The value of this parameter indicates the total number of times all APIs in the API group can be accessed within a specified period, and not the number of times each API can be accessed within the period.	RU	-

4.1.2 Creating an API Group

Function

This API is used to create an API group. An API group is an API management unit and the entry to a service. A subdomain name is returned as the access entry when an API group is created. APIs in an API group should be correlated with each other.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-2 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/api-groups

Request

Table 4-3 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	API group name An API group name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
remark	No	String	Description of the API group The description cannot exceed 255 characters.

Example request:

```
{
  "name": "api_group_001",
  "remark": "API group 1"
}
```

Response

Table 4-4 Parameter description

Parameter	Type	Description
id	String	API group ID
name	String	API group name
status	Integer	Status of the API group
sl_domain	String	Subdomain name that API Gateway automatically allocates to the API group
sl_domains	Array of strings	List of subdomain names that API Gateway automatically allocates to the API group
register_time	Timestamp	Time when the API group is created
update_time	Timestamp	Time when the API group was last modified
remark	String	Description of the API group
on_sell_status	Integer	Indicates whether the API group has been listed on the marketplace. The value can be: <ul style="list-style-type: none"> ● 1: listed ● 2: not listed ● 3: under approval

Parameter	Type	Description
call_limits	Integer	Total number of times all APIs in the API group can be accessed. Set this parameter while considering the payload capacity of the backend service. By default, there is no limit on the number of API calls.
time_interval	Integer	Period of time for limiting the number of API calls
time_unit	String	Time unit for limiting the number of API calls
url_domains	Array of UrlDomainsResp objects	List of independent domain names bound to the API group
is_default	Integer	Indicates whether the API group is the default API group. By default, the API group is not the default API group. The value can be: <ul style="list-style-type: none"> 1: default API group 2: non-default API group

Table 4-5 UrlDomainsResp

Parameter	Type	Description
id	String	Domain ID
domain	String	Domain name
cname_status	Integer	CNAME resolution status of the domain name, which can be: <ul style="list-style-type: none"> 1: not resolved 2: resolving 3: resolved 4: resolution failed
ssl_id	String	SSL certificate ID
ssl_name	String	SSL certificate name

Example response:

```
{
  "id": "7efb2b91-155a-4f6a-9f45-c5c95a6e4950",
  "name": "api_group_001",
  "status": 1,
  "sl_domain": "0e91b83b-0774-4e8e-b187-2d695ed4743b.apigw.example.com",
  "sl_domains": ["0e91b83b-0774-4e8e-b187-2d695ed4743b.apigw.example.com", "0e91b83b-0774-4e8e-b187-2d695ed4743b.apigw.example.cn"],
  "remark": "API group 1",
  "register_time": "2017-12-28T11:44:53.831282304Z",
}
```

```

"update_time": "2017-12-28T11:44:53.831283436Z",
"on_sell_status": 2,
"is_default": 2
}

```

Status Codes

Table 4-6 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

4.1.3 Modifying an API Group

Function

This API is used to modify the attributes of an API group. Only the **name** and **remark** attributes of an API group can be modified.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-7 HTTP/HTTPS request method and URI

Request Method	URI
PUT	/v1.0/apigw/api-groups/{id}

The following table lists the parameter in the URI.

Table 4-8 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	API group ID

Request

Table 4-9 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	API group name An API group name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
remark	No	String	Description of the API group The description cannot exceed 255 characters.

Example request:

```
{
  "name": "api_group_001",
  "remark": "API group 001"
}
```

Response

Table 4-10 Parameter description

Parameter	Type	Description
id	String	API group ID
name	String	API group name
status	Integer	Status of the API group
sl_domain	String	Subdomain name that API Gateway automatically allocates to the API group
sl_domains	String	List of subdomain names that API Gateway automatically allocates to the API group
register_time	Timestamp	Time when the API group is created
update_time	Timestamp	Time when the API group was last modified
remark	String	Description of the API group
call_limits	Integer	Total number of times all APIs in the API group can be accessed. Set this parameter while considering the payload capacity of the backend service. By default, there is no limit on the number of API calls.

Parameter	Type	Description
time_interval	Integer	Period of time for limiting the number of API calls
time_unit	String	Time unit for limiting the number of API calls
url_domains	Array of UrlDomainsResp objects	List of independent domain names bound to the API group
on_sell_status	Integer	Indicates whether the API group has been listed on the marketplace. The value can be: <ul style="list-style-type: none"> 1: listed 2: not listed 3: under approval
is_default	Integer	Indicates whether the API group is the default API group. By default, the API group is not the default API group. The value can be: <ul style="list-style-type: none"> 1: default API group 2: non-default API group

Table 4-11 UrlDomainsResp

Parameter	Type	Description
id	String	Domain ID
domain	String	Domain name
cname_status	Integer	CNAME resolution status of the domain name, which can be: <ul style="list-style-type: none"> 1: not resolved 2: in progress 3: successful 4: failed
ssl_id	String	ID of the SSL certificate
ssl_name	String	Name of the SSL certificate

Example response:

```
{
  "id": "7efb2b91-155a-4f6a-9f45-c5c95a6e4950",
  "name": "api_group_001",
  "status": 1,
  "sl_domain": "0e91b83b-0774-4e8e-b187-2d695ed4743b.apigw.example.com",
  "sl_domains": ["0e91b83b-0774-4e8e-b187-2d695ed4743b.apigw.example.com", "0e91b83b-0774-4e8e-b187-2d695ed4743b.apigw.example.cn"],
}
```



```

"remark": "API group 001",
"register_time": "2017-12-28T11:44:53Z",
"update_time": "2017-12-28T11:49:01.048600577Z",
"on_sell_status": 2,
  "is_default": 2
}

```

Status Codes

Table 4-12 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
409	Conflict
500	Server Internal Error

4.1.4 Deleting an API Group

Function

This API is used to delete an API group.

If the group to delete contains APIs, take the APIs offline and delete them.

All resources (independent domain names, SSL certificates, and release information) directly or indirectly associated with the group will be deleted. The operation will unbind the external domain names from the subdomain name based on the CNAME resolution mode.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-13 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/api-groups/{id}

The following table lists the parameter in the URI.

Table 4-14 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	API group ID

Request

N/A

Response

N/A

Status Codes

Table 4-15 Status codes

Status Code	Description
204	No Content
401	Unauthorized
403	Forbidden
404	Not Found
409	Conflict
500	Server Internal Error

4.1.5 Querying Details of an API Group

Function

This API is used to query the details of an API group.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-16 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/api-groups/{id}

The following table lists the parameter in the URI.

Table 4-17 Parameter description

Parameter	Mandator y	Type	Description
id	Yes	String	API group ID

Request

N/A

Response

Table 4-18 Parameter description

Parameter	Type	Description
id	String	API group ID
name	String	API group name
status	Integer	Status of the API group
sl_domain	String	Subdomain name that API Gateway automatically allocates to the API group
sl_domains	Array of strings	List of subdomain names that API Gateway automatically allocates to the API group
register_time	Timestamp	Time when the API group is created
update_time	Timestamp	Time when the API group was last modified
remark	String	Description of the API group
call_limits	Integer	Total number of times all APIs in the API group can be accessed. Set this parameter while considering the payload capacity of the backend service. By default, there is no limit on the number of API calls.
time_interval	Integer	Period of time for limiting the number of API calls
time_unit	String	Time unit for limiting the number of API calls
url_domains	Array of UrlDomainsResp objects	List of independent domain names bound to the API group

Parameter	Type	Description
on_sell_status	Integer	Indicates whether the API group has been listed on the marketplace. The value can be: <ul style="list-style-type: none"> • 1: listed • 2: not listed • 3: under approval

Table 4-19 UrlDomainsResp

Parameter	Type	Description
id	String	Domain ID
domain	String	Domain name
cname_status	Integer	CNAME resolution status of the domain name, which can be: <ul style="list-style-type: none"> • 1: not resolved • 2: in progress • 3: successful • 4: failed
ssl_id	String	SSL certificate ID
ssl_name	String	SSL certificate name

Example response:

```
{
  "id": "7efb2b91-155a-4f6a-9f45-c5c95a6e4950",
  "name": "api_group_001",
  "status": 1,
  "sl_domain": "0e91b83b-0774-4e8e-b187-2d695ed4743b.apigw.example.com",
  "sl_domains": ["0e91b83b-0774-4e8e-b187-2d695ed4743b.apigw.example.com", "0e91b83b-0774-4e8e-b187-2d695ed4743b.apigw.example.cn"],
  "remark": "API group 001",
  "register_time": "2017-12-28T11:44:53Z",
  "update_time": "2017-12-28T11:49:01.048601Z",
  "call_limits": 1000,
  "time_interval": 1,
  "time_unit": "SECOND",
  "on_sell_status": 2
}
```

Status Codes

Table 4-20 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.1.6 Querying the API Group List

Function

This API is used to query the list of API groups under a tenant or all tenants.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-21 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/api-groups[?page_size, page_no, id, name]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **id**, **name**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-22 Parameter description

Parameter	Mandatory	Type	Description
id	No	String	API group ID
name	No	String	API group name

Parameter	Mandatory	Type	Description
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .
precise_search	No	String	Parameter name for exact matching

Request

N/A

Response

Table 4-23 Parameter description

Parameter	Type	Description
total	Integer	Number of API groups that match the query conditions
size	Integer	Length of the returned API group list
groups	Dictionary	API group list

Table 4-24 API group parameter description

Parameter	Type	Description
id	String	API group ID
name	String	API group name
status	Integer	API group status
sl_domain	String	Subdomain name that API Gateway automatically allocates to the API group
sl_domains	Array of strings	List of subdomain names that API Gateway automatically allocates to the API group
register_time	Timestamp	Time when the API group is created
update_time	Timestamp	Time when the API group was last modified

Parameter	Type	Description
remark	String	Description of the API group
on_sell_status	Integer	Indicates whether the API group has been listed on the marketplace. The value can be: <ul style="list-style-type: none"> • 1: listed • 2: not listed • 3: under approval
call_limits	Integer	Total number of times all APIs in the API group can be accessed. Set this parameter while considering the payload capacity of the backend service. By default, there is no limit on the number of API calls.
time_interval	Integer	Period of time for limiting the number of API calls
time_unit	String	Time unit for limiting the number of API calls
url_domains	Array of UrlDomainsResp objects	List of independent domain names bound to the API group

Table 4-25 UrlDomainsResp

Parameter	Type	Description
id	String	Domain ID
domain	String	Domain name
cname_status	Integer	CNAME resolution status of the domain name, which can be: <ul style="list-style-type: none"> • 1: not resolved • 2: resolving • 3: resolved • 4: resolution failed
ssl_id	String	SSL certificate ID
ssl_name	String	SSL certificate name

Example response:

```
{
  "total": 2,
  "size": 2,
  "groups": [{
    "id": "02a8ab3c-b278-4de5-a096-852829671ae7",
    "name": "api_group_002",
```

```

    "status": 1,
    "sl_domain": "19e62eca-43d9-4ce2-a478-b3f48e67fb91.apigw.example.com",
    "sl_domains": ["19e62eca-43d9-4ce2-a478-
b3f48e67fb91.apigw.example.com","19e62eca-43d9-4ce2-a478-b3f48e67fb91.apigw.example.cn"],
    "remark": "API group 002",
    "register_time": "2017-12-28T11:57:35Z",
    "update_time": "2017-12-28T11:57:35Z",
    "on_sell_status": 2
  },
  {
    "id": "73c58022-f20d-495a-a188-85d718647f09",
    "name": "api_group_001",
    "status": 1,
    "sl_domain": "c4c230d1-a8f2-4816-b9df-09ac5989180c.apigw.example.com",
    "sl_domains": ["c4c230d1-a8f2-4816-b9df-09ac5989180c.apigw.example.com","c4c230d1-
a8f2-4816-b9df-09ac5989180c.apigw.example.cn"],
    "remark": "API group 001",
    "register_time": "2017-12-28T11:57:27Z",
    "update_time": "2017-12-28T11:57:27Z",
    "on_sell_status": 2
  }
}

```

Status Codes

Table 4-26 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
500	Server Internal Error

4.2 API Management

4.2.1 Object Model

This section describes the API and backend service object models.

 NOTE

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of C is mandatory.

Table 4-27 API object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	API ID	R	-

Parameter	Type	Description	Operation Type	Mandatory
name	String	API name	CRU	Yes
group_id	String	ID of the API group to which the API belongs	CR	Yes
type	Integer	Type of the API, which can be: <ul style="list-style-type: none"> • 1: public 	CRU	Yes
status	Integer	Status of the API, which can be: <ul style="list-style-type: none"> • 1: enabled • 2: disabled • 3: deleted Default value: 1 This parameter is not used currently.	R	-
version	String	Version of the API	CRU	No
req_protocol	String	Request protocol, which can be: <ul style="list-style-type: none"> • HTTP • HTTPS • BOTH: The API can be accessed through both HTTP and HTTPS. Default value: HTTPS	CRU	No
req_method	String	Request method, which can be: <ul style="list-style-type: none"> • GET • POST • PUT • DELETE • HEAD • PATCH • OPTIONS • ANY 	CRU	Yes
req_uri	String	Access address (URI) of the API, excluding the domain name, port number, and request protocol	CRU	Yes

Parameter	Type	Description	Operation Type	Mandatory
auth_type	String	Security authentication mode, which can be: <ul style="list-style-type: none"> • NONE • APP • IAM • AUTHORIZER 	CRU	Yes
authorizer_id	String	ID of the frontend custom authorizer	CRU	No
match_mode	String	Route matching mode, which can be: <ul style="list-style-type: none"> • SWA: prefix match • NORMAL: exact match 	CRU	Yes
arrange_necessary	Integer	Indicates whether orchestration is required. The value can be: <ul style="list-style-type: none"> • 1: yes • 2: no Default value: 2	R	-
backend_type	String	Backend type, which can be: <ul style="list-style-type: none"> • HTTP (web) • FUNCTION • MOCK 	CRU	Yes
register_time	Timestamp	Time when the API is registered	R	-
update_time	Timestamp	Time when the API was last modified	R	-
remark	String	Description of the API	CRU	No
tag	String	API tag	CRU	No
cors	String	Indicates whether cross-origin resource sharing (CORS) is supported <ul style="list-style-type: none"> • TRUE: supported • FALSE: not supported Default value: FALSE	CRU	No
response_id	String	ID of the custom response	CRU	No

Table 4-28 Web backend object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	Web backend ID	R	-
status	Integer	Status of the web backend, which can be: <ul style="list-style-type: none"> • 1: enabled • 2: disabled • 3: deleted Default value: 1 This parameter is not used currently.	R	-
version	String	Version of the web backend	CRU	No
url_domain	String	Backend endpoint	CRU	Yes
req_protocol	String	Request protocol, which can be: <ul style="list-style-type: none"> • HTTP • HTTPS 	CRU	Yes
req_method	String	Request method, which can be: <ul style="list-style-type: none"> • GET • POST • PUT • DELETE • HEAD • PATCH • OPTIONS • ANY 	CRU	Yes
req_uri	String	Access address (URI) of the web backend	CRU	Yes
timeout	Integer	Timeout duration in milliseconds. Range: 1–60,000.	CRU	Yes
front_api_id	String	API ID	R	-
register_time	Timestamp	Time when the web backend is registered	R	-

Parameter	Type	Description	Operation Type	Mandatory
update_time	Timestamp	Time when the web backend was last modified	R	-
remark	String	Description of the web backend	CRU	No
vpc_status	Integer	Indicates whether to use a VPC channel. The value can be: <ul style="list-style-type: none"> • 1: yes • 2: no 	CRU	No. No VPC channel is used by default.
vpc_info	String	VPC channel information	CRU	No This parameter is required only when vpc_status is set to 1.
authorizer_id	String	ID of the backend custom authorizer	CRU	No

Table 4-29 Mock backend object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	Mock backend ID	R	-
front_api_id	String	API ID	R	-

Parameter	Type	Description	Operation Type	Mandatory
status	Integer	Status of the Mock backend, which can be: <ul style="list-style-type: none"> • 1: enabled • 2: disabled • 3: deleted Default value: 1 This parameter is not used currently.	R	-
version	String	Version of the Mock backend	CRU	No
result_content	String	Mock response	CRU	No
register_time	Timestamp	Time when the Mock backend is registered	R	-
update_time	Timestamp	Time when the Mock backend was last modified	R	-
remark	String	Description of the Mock backend	CRU	No

Table 4-30 Request parameter object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	Parameter ID	R	-
front_api_id	String	API ID	R	-
name	String	Parameter name	CRU	Yes
type	String	Parameter type, which can be: <ul style="list-style-type: none"> • string • number 	CRU	Yes
location	String	Parameter location, which can be: <ul style="list-style-type: none"> • PATH • QUERY • HEADER • FORMDATA 	CRU	Yes

Parameter	Type	Description	Operation Type	Mandatory
default_value	String	Default value	CRU	No
sample_value	String	Example value	CRU	No
required	Integer	Whether the parameter is mandatory <ul style="list-style-type: none"> 1: yes 2: no 	CRU	Yes
valid_enable	Integer	Whether validity check is enabled <ul style="list-style-type: none"> 1: yes 2: no 	CRU	Yes
remark	String	Parameter description	CRU	No
enumerations	String	Enumerated value	CRU	No
min_num	String	Minimum value	CRU	No
max_num	String	Maximum value	CRU	No
min_size	Integer	Minimum length	CRU	No
max_size	Integer	Maximum length	CRU	No
regular	String	Regular verification rule (currently not supported)	CRU	No
json_schema	String	JSON verification rule (currently not supported)	CRU	No

Table 4-31 Backend parameter object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	Parameter ID	R	-
front_api_id	String	API ID	R	-
req_param_id	String	ID of the request parameter to which the backend parameter is mapped	R	-
name	String	Parameter name	CRU	Yes

Parameter	Type	Description	Operation Type	Mandatory
location	String	Parameter location, which can be: <ul style="list-style-type: none"> • PATH • QUERY • HEADER • FORMDATA 	CRU	Yes
origin	String	Parameter type, which can be: <ul style="list-style-type: none"> • REQUEST • CONSTANT • SYSTEM 	CRU	Yes
value	String	Parameter value <ul style="list-style-type: none"> • If origin is set to REQUEST, the value is the name of the request parameter. • If origin is set to SYSTEM, the value is the name of the gateway parameter. • If origin is set to CONSTANT, the value is the real value of the backend parameter. 	CRU	No
remark	String	Parameter description	CRU	No
policy_id	String	ID of the associated policy condition	CRU	No

Table 4-32 Web backend policy object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	Backend ID	R	-
front_api_id	String	API ID	R	-
name	String	Backend name	CRU	Yes
url_domain	String	Backend endpoint	CRU	Yes

Parameter	Type	Description	Operation Type	Mandatory
req_protocol	String	Request protocol, which can be: <ul style="list-style-type: none"> • HTTP • HTTPS 	CRU	Yes
req_method	String	Request method, which can be: <ul style="list-style-type: none"> • GET • POST • PUT • DELETE • HEAD • PATCH • OPTIONS • ANY 	CRU	Yes
req_uri	String	Access address (URI) of the web backend	CRU	Yes
timeout	Integer	Timeout duration in milliseconds. Range: 1-60,000.	CRU	No
vpc_status	Integer	Indicates whether to use a VPC channel. The value can be: <ul style="list-style-type: none"> • 1: yes • 2: no 	CRU	No. No VPC channel is used by default.
vpc_info	String	VPC channel information	CRU	No. This parameter is required only when vpc_status is set to 1 .

Parameter	Type	Description	Operation Type	Mandatory
effect_mode	String	Effective mode of the backend policy <ul style="list-style-type: none"> • ALL • ANY 	CRU	Yes

Table 4-33 Mock backend policy object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	Backend ID	R	-
front_api_id	String	API ID	R	-
name	String	Backend name	CRU	Yes
result_content	String	Mock response	CRU	No
effect_mode	String	Effective mode of the backend policy <ul style="list-style-type: none"> • ALL • ANY 	CRU	Yes

Table 4-34 FunctionGraph policy backend object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	Backend ID	R	-
front_api_id	String	API ID	R	-
name	String	Backend name	CRU	Yes
version	String	Function version	CRU	No
function_urn	String	Function URN	CRU	Yes
invocation_type	String	Invocation mode, which can be async or sync	CRU	Yes
timeout	Integer	Timeout duration in milliseconds. Range: 1–60,000.	CRU	Yes

Parameter	Type	Description	Operation Type	Mandatory
effect_mode	String	Effective mode of the backend policy <ul style="list-style-type: none"> • ALL • ANY 	CRU	Yes

Table 4-35 Backend policy condition object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	Backend policy condition ID	R	-
condition_type	String	Condition type. Options: <ul style="list-style-type: none"> • exact: Exact match • enum: Enumeration • pattern: Regular expression 	CRU	No
condition_value	String	Condition value	CRU	Yes
condition_origin	String	Condition source. Options: <ul style="list-style-type: none"> • param: Input parameter • source: Source IP address 	CRU	Yes
req_param_id	String	Input parameter ID	R	-
policy_backend_id	String	Backend policy ID	CRU	Yes

Table 4-36 Authentication mode parameter object model

Parameter	Type	Description	Operation Type	Mandatory
app_code_auth_type	String	<p>Indicates whether AppCode authentication is enabled. This parameter is valid only when auth_type is set to App. The default value is DISABLE.</p> <ul style="list-style-type: none"> • DISABLE: AppCode authentication is disabled. • HEADER: AppCode authentication is enabled and the AppCode is located in the header. 	CRU	-

4.2.2 Registering an API

Function

This API is used to register an API. API is an interface that encapsulates a set of service capabilities.

The definition of an API is divided into two parts. One part defines how the API is called by users, and the other part defines how API Gateway accesses the actual backend service requested by users.

API Gateway supports three backend types: HTTP/HTTPS web, FunctionGraph, and Mock.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-37 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/apis

Request

Table 4-38 Parameter description

Parameter	Mandatory	Type	Description
group_id	Yes	String	ID of the API group to which the API to be created will belong
name	Yes	String	API name An API name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
type	Yes	Integer	Indicates whether the API is available to the public. The value can be: <ul style="list-style-type: none"> • 1: public
version	No	String	Version of the API A maximum of 16 characters are allowed.
req_protocol	No	String	Request protocol, which can be: <ul style="list-style-type: none"> • HTTP • HTTPS • BOTH: The API can be accessed through both HTTP and HTTPS. Default value: HTTPS
req_method	Yes	String	Request method, which can be: <ul style="list-style-type: none"> • GET • POST • PUT • DELETE • HEAD • PATCH • OPTIONS • ANY
req_uri	Yes	String	Access address NOTE The value of this parameter must comply with URI specifications.
match_mode	No	String	Route matching mode, which can be: <ul style="list-style-type: none"> • SWA: prefix match • NORMAL: exact match Default value: NORMAL

Parameter	Mandatory	Type	Description
remark	No	String	Description of the API The description cannot exceed 255 characters.
auth_type	Yes	String	Security authentication mode, which can be: <ul style="list-style-type: none"> • NONE • APP • IAM • AUTHORIZER
auth_opt	No	AuthOpt object	Security authentication mode parameter
authorizer_id	No	String	ID of the frontend custom authorizer
backend_type	Yes	String	Backend type, which can be: <ul style="list-style-type: none"> • HTTP: web backend • FUNCTION: FunctionGraph backend • MOCK: Mock backend
tag	No	String	Service name tag This field will be discarded.
tags	No	Array of string	API tags Optional. This parameter contains a service name tag and other tags. The service name tag must start with APIG-SN-. Other tags cannot start with APIG-SN-.
cors	No	Bool	Indicates whether CORS is supported. <ul style="list-style-type: none"> • TRUE: supported • FALSE: not supported Default value: FALSE
body_remark	No	String	Description of the API request body, which can be an example request body, media type, or parameter information The description cannot exceed 20,480 characters.
result_normal_sample	No	String	Example response for a successful request The length cannot exceed 20,480 characters.

Parameter	Mandatory	Type	Description
result_failure_sample	No	String	Example response for a failed request The length cannot exceed 20,480 characters.
response_id	No	String	ID of the custom response
backend_api	Required if backend_type is set to HTTP .	Dictionary	Web backend details
mock_info	Required if backend_type is set to MOCK .	Dictionary	Mock backend details
func_info	Required if backend_type is set to FUNCTION .	Dictionary	FunctionGraph backend details
req_params	No	Dictionary	Request parameter list
backend_params	No	Dictionary	Backend parameter list
policy_https	Optional if backend_type is set to HTTP .	Dictionary	Web backend policy list
policy_mocks	Optional if backend_type is set to MOCK .	Dictionary	Mock backend policy list

Parameter	Mandatory	Type	Description
policy_functions	Optional if backend_type is set to FUNCTION .	Dictionary	FunctionGraph backend policy list

Table 4-39 Parameter description of backend_api

Parameter	Mandatory	Type	Description
url_domain	Required when no VPC channel is used.	String	Backend service address An endpoint URL is in the format of "domain name (or IP address):port number", with up to 255 characters. For example, apig.example.com:7443 . By default, the port number would be 443 for HTTPS or 80 for HTTP if it is not specified. An endpoint can contain environment variables, each starting with a letter and consisting of 3–32 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed in environment variables.
version	No	String	Web backend version A maximum of 16 characters are allowed.
req_protocol	Yes	String	Request protocol, which can be: <ul style="list-style-type: none"> • HTTP • HTTPS
req_method	Yes	String	Request method, which can be: <ul style="list-style-type: none"> • GET • POST • PUT • DELETE • HEAD • PATCH • OPTIONS • ANY

Parameter	Mandatory	Type	Description
req_uri	Yes	String	Request address A request address can contain up to 512 characters and must comply with URI specifications. The request address can contain environment variables, each starting with a letter and consisting of 3–32 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed in environment variables. NOTE The value of this parameter must comply with URI specifications.
timeout	Yes	Integer	Timeout duration for API Gateway to request for the backend service. Range: 1–60,000. Unit: ms.
remark	No	String	Description of the backend service The description cannot exceed 255 characters.
vpc_status	No	Integer	Indicates whether to use a VPC channel. The value can be: <ul style="list-style-type: none"> • 1: yes • 2: no
vpc_info	Required when vpc_status is set to 1.	Dictionary	VPC channel details
authorizer_id	No	String	ID of the backend custom authorizer

Table 4-40 VPC channel parameter description

Parameter	Mandatory	Type	Description
vpc_id	Yes	String	VPC channel ID
vpc_proxy_host	No	String	Proxy host

Table 4-41 Parameter description of mock_info

Parameter	Mandatory	Type	Description
result_content	No	String	Mock response
version	No	String	Version of the Mock backend A maximum of 64 characters are allowed.
remark	No	String	Description of the Mock backend The description cannot exceed 255 characters.

Table 4-42 Parameter description of func_info

Parameter	Mandatory	Type	Description
function_urn	Yes	String	Function URN
invocation_type	Yes	String	Invocation mode, which can be async or sync
timeout	Yes	Integer	Timeout duration for API Gateway to request for FunctionGraph. Range: 1–60,000. Unit: ms.
version	No	String	Function version A maximum of 64 characters are allowed.
remark	No	String	Description of the function The description cannot exceed 255 characters.

Table 4-43 Parameter description of req_params

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name A parameter name consists of 1–32 characters, starting with a letter. Only letters, digits, periods (.), hyphens (-), and underscores (_) are allowed.

Parameter	Mandatory	Type	Description
type	Yes	String	Parameter type, which can be: <ul style="list-style-type: none"> • STRING • NUMBER
location	Yes	String	Parameter location, which can be: <ul style="list-style-type: none"> • PATH • QUERY • HEADER
default_value	No	String	Default value
sample_value	No	String	Example value
required	No	Integer	Indicates whether the parameter is mandatory. <ul style="list-style-type: none"> • 1: yes • 2: no The value of this parameter is 1 if Location is set to PATH and 2 if Location is set to another value.
valid_enabled	No	Integer	Indicates whether validity check is enabled. <ul style="list-style-type: none"> • 1: enabled • 2: disabled The default value is 2 .
remark	No	String	Description of the parameter The description cannot exceed 255 characters.
enumerations	No	String	Enumerated value
min_num	No	Integer	Minimum value, which is valid when the parameter type is NUMBER
max_num	No	Integer	Maximum value, which is valid when the parameter type is NUMBER
min_size	No	Integer	Minimum length
max_size	No	Integer	Maximum length
regular	No	String	Regular verification rule (currently not supported)
json_schema	No	String	JSON verification rule (currently not supported)

Table 4-44 Parameter description of backend_params

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name A parameter name consists of 1–32 characters, starting with a letter. Only letters, digits, periods (.), hyphens (-), and underscores (_) are allowed.
location	Yes	String	Parameter location, which can be: <ul style="list-style-type: none"> • PATH • QUERY • HEADER
origin	Yes	String	Parameter type, which can be: <ul style="list-style-type: none"> • REQUEST • CONSTANT • SYSTEM
value	Yes	String	Parameter value, which can contain no more than 255 characters If origin is set to REQUEST , the value is the parameter name in req_params . If origin is set to CONSTANT , the value is the real value of the backend parameter. If origin is set to SYSTEM , the value is the name of the gateway parameter.
remark	No	String	Description of the parameter The description cannot exceed 255 characters.

Table 4-45 Parameter description of policy_https

Parameter	Mandatory	Type	Description
name	Yes	String	Backend name A backend name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.

Parameter	Mandatory	Type	Description
url_domain	Required when no VPC channel is used.	String	<p>Endpoint of the policy backend</p> <p>An endpoint consists of a domain name or IP address and a port number, with not more than 255 characters. It must be in the format "<i>Domain name.Port number</i>", for example, apig.example.com:7443. By default, the port number would be 443 for HTTPS or 80 for HTTP if it is not specified.</p> <p>An endpoint can contain environment variables, each starting with a letter and consisting of 3–32 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed in environment variables.</p>
req_protocol	Yes	String	<p>Request protocol, which can be:</p> <ul style="list-style-type: none"> • HTTP • HTTPS
req_method	Yes	String	<p>Request method, which can be:</p> <ul style="list-style-type: none"> • GET • POST • PUT • DELETE • HEAD • PATCH • OPTIONS • ANY
req_uri	Yes	String	<p>Request address</p> <p>A request address can contain up to 512 characters and must comply with URI specifications.</p> <p>The request address can contain environment variables, each starting with a letter and consisting of 3–32 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed in environment variables.</p> <p>NOTE The value of this parameter must comply with URI specifications.</p>
timeout	No	Integer	<p>Timeout duration for API Gateway to request for the backend service. Range: 1–60,000.</p> <p>Unit: ms.</p>

Parameter	Mandatory	Type	Description
vpc_status	No	Integer	Indicates whether to use a VPC channel. The value can be: <ul style="list-style-type: none"> 1: yes 2: no
vpc_info	Required when vpc_status is set to 1.	Dictionary	VPC channel details
effect_mode	Yes	String	Effective mode of the backend policy <ul style="list-style-type: none"> ALL ANY
conditions	Yes	Dictionary	Policy condition list
backend_params	No	Dictionary	Backend parameter list

Table 4-46 Parameter description of policy_mocks

Parameter	Mandatory	Type	Description
name	Yes	String	Backend name A backend name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
result_content	No	String	Mock response
effect_mode	Yes	String	Effective mode of the backend policy <ul style="list-style-type: none"> ALL ANY
conditions	Yes	Dictionary	Policy condition list
backend_params	No	Dictionary	Backend parameter list

Table 4-47 Parameter description of policy_functions

Parameter	Mandatory	Type	Description
name	Yes	String	Backend name A backend name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
function_urn	Yes	String	Function URN
invocation_type	Yes	String	Invocation mode. Options: <ul style="list-style-type: none"> • async: asynchronous • sync: synchronous
timeout	No	Integer	Timeout duration for API Gateway to request for FunctionGraph. Range: 1–60,000. Unit: ms.
version	No	String	Function version A maximum of 64 characters are allowed.
effect_mode	Yes	String	Effective mode of the backend policy <ul style="list-style-type: none"> • ALL • ANY
conditions	Yes	Dictionary	Policy condition list
backend_params	No	Dictionary	Backend parameter list

Table 4-48 Parameter description of conditions

Parameter	Mandatory	Type	Description
condition_type	Mandatory if the policy type is param .	String	Condition type. Options: <ul style="list-style-type: none"> • exact: Exact match • enum: Enumeration • pattern: Regular expression
condition_value	Yes	String	Condition value

Parameter	Mandatory	Type	Description
condition_origin	Yes	String	Condition source. Options: <ul style="list-style-type: none"> • param: Input parameter • source: Source IP address
req_param_name	Mandatory if the policy type is param .	String	Input parameter name

Table 4-49 AuthOpt

Parameter	Mandatory	Type	Description
app_code_auth_type	No	String	Indicates whether AppCode authentication is enabled. This parameter is valid only when auth_type is set to App . The default value is DISABLE . <ul style="list-style-type: none"> • DISABLE: AppCode authentication is disabled. • HEADER: AppCode authentication is enabled and the AppCode is located in the header.

Example request:

```
{
  "auth_type": "app",
  "auth_opt": {
    "app_code_auth_type": "HEADER"
  },
  "backend_api": {
    "req_method": "get",
    "req_protocol": "http",
    "req_uri": "/test",
    "timeout": 1000,
    "url_domain": "xxxxxxxxxx"
  },
  "backend_params": [
    {
      "location": "query",
      "name": "project_id",
      "origin": "request",
      "value": "project_id"
    },
    {
      "location": "query",
      "name": "city",
      "origin": "request",

```

```

    "value": "city"
  }
],
"backend_type": "http",
"group_id": "f71f69876f90456ca6fd18ed012fdc11",
"name": "test",
"req_method": "get",
"req_params": [
  {
    "location": "path",
    "name": "project_id",
    "required": 1,
    "type": "string"
  },
  {
    "location": "query",
    "name": "city",
    "required": 2,
    "type": "string"
  }
],
"req_uri": "/test/{project_id}",
"tags": ["APIG-SN-test", "test"],
"type": 1,
"result_normal_sample": "hello world!"
}

```

Response

Table 4-50 Parameter description

Parameter	Type	Description
id	String	API ID
name	String	API name
group_id	String	ID of the API group to which the API belongs
group_name	String	Name of the API group to which the API belongs
status	Integer	API status
type	Integer	API type
version	String	API version
req_protocol	String	Request protocol
req_method	String	Request method
req_uri	String	Access address
auth_type	String	Security authentication mode
auth_opt	Object	Security authentication mode parameter
match_mode	String	Matching mode
register_time	Timestamp	Time when the API is registered
update_time	Timestamp	Time when the API was last modified

Parameter	Type	Description
remark	String	API description
backend_type	String	Backend type
arrange_necessary	Integer	Indicates whether orchestration is required.
tag	String	Service name tag, which is to be discarded
tags	[]String	API tags
cors	Bool	Indicates whether CORS is supported.
body_remark	String	Description of the API request body, which can be an example request body, media type, or parameter information
result_normal_sample	String	Example response for a successful request
result_failure_sample	String	Example response for a failed request
response_id	String	ID of the gateway response
backend_api	Dictionary	Web backend details
mock_info	Dictionary	Mock backend details
func_info	Dictionary	FunctionGraph backend details
req_params	Dictionary	Request parameter list
backend_params	Dictionary	Backend parameter list
policy_https	Dictionary	Web backend policy list
policy_mocks	Dictionary	Mock backend policy list
policy_functions	Dictionary	FunctionGraph backend policy list

Table 4-51 Parameter description of backend_api

Parameter	Type	Description
id	String	Backend ID
status	Integer	Web backend status
url_domain	String	Backend endpoint
version	String	Web backend version

Parameter	Type	Description
req_protocol	String	Request protocol
req_method	String	Request method
req_uri	String	Access address
timeout	Integer	Timeout duration in milliseconds
register_time	Timestamp	Time when the web backend is registered
update_time	Timestamp	Time when the web backend was last modified
remark	String	Description of the web backend
vpc_status	String	Indicates whether to use a VPC channel.
vpc_info	String	VPC channel information

Table 4-52 Parameter description of mock_info

Parameter	Type	Description
id	String	Mock backend ID
status	Integer	Mock backend status
version	String	Mock backend version
result_content	String	Mock response
register_time	Timestamp	Time when the Mock backend is registered
update_time	Timestamp	Time when the Mock backend was last modified
remark	String	Description of the Mock backend

Table 4-53 Parameter description of func_info

Parameter	Type	Description
id	String	Function ID
status	Integer	Function status
version	String	Function version
function_urn	String	Function URN
invocation_type	String	Invocation mode, which can be async or sync
register_time	Timestamp	Time when the function is registered

Parameter	Type	Description
update_time	Timestamp	Time when the function was last updated
timeout	Integer	Timeout duration in milliseconds
remark	String	Description of the function

Table 4-54 Parameter description of req_params

Parameter	Type	Description
id	String	Parameter ID
name	String	Parameter name
type	String	Parameter type
location	String	Parameter location
default_value	String	Default value
sample_value	String	Example value
required	Integer	Indicates whether the parameter is mandatory.
valid_enable	Integer	Indicates whether validity check is enabled.
remark	String	Description of the parameter
enumerations	String	Enumerated value
min_num	Integer	Minimum value, which is valid when the parameter type is NUMBER
max_num	Integer	Maximum value, which is valid when the parameter type is NUMBER
min_size	Integer	Minimum length
max_size	Integer	Maximum length
regular	String	Regular verification rule (currently not supported)
json_schema	String	JSON verification rule (currently not supported)

Table 4-55 Parameter description of backend_params

Parameter	Type	Description
id	String	Parameter ID

Parameter	Type	Description
req_param_id	String	ID of the request parameter to which the backend parameter is mapped
name	String	Parameter name
location	String	Parameter location
origin	String	Parameter type
value	String	Parameter value
remark	String	Description of the backend parameter

Table 4-56 Parameter description of policy_https

Parameter	Type	Description
id	String	Backend policy ID
name	String	Backend name
url_domain	String	Endpoint of the policy backend
req_protocol	String	Request protocol
req_method	String	Request method
req_uri	String	Access address
timeout	Integer	Timeout duration in milliseconds
vpc_status	String	Indicates whether to use a VPC channel.
vpc_info	String	VPC channel information
effect_mode	String	Effective mode of the backend policy
conditions	Dictionary	Policy condition list
backend_params	Dictionary	Backend parameter list

Table 4-57 Parameter description of policy_mocks

Parameter	Type	Description
id	String	Backend policy ID
name	String	Backend name
result_content	String	Mock response
effect_mode	String	Effective mode of the backend policy

Parameter	Type	Description
conditions	Dictionary	Policy condition list
backend_params	Dictionary	Backend parameter list

Table 4-58 Parameter description of policy_functions

Parameter	Type	Description
id	String	Backend policy ID
name	String	Backend name
version	String	Function version
function_urn	String	Function URN
invocation_type	String	Invocation mode, which can be async or sync
timeout	Integer	Timeout duration in milliseconds
effect_mode	String	Effective mode of the backend policy
conditions	Dictionary	Policy condition list
backend_params	Dictionary	Backend parameter list

Table 4-59 Parameter description of conditions

Parameter	Type	Description
id	String	Backend policy condition ID
condition_type	String	Condition type
condition_value	String	Condition value
condition_origin	String	Condition source
req_param_name	String	Input parameter name
req_param_id	String	Input parameter ID
req_param_location	String	Input parameter location

Table 4-60 Parameter description of auth_opt

Parameter	Type	Description
app_code_auth_type	String	Indicates whether AppCode authentication is enabled.

Example response:

```
{
  "name": "test",
  "type": 1,
  "version": "V0.0.1",
  "req_protocol": "HTTPS",
  "req_method": "GET",
  "req_uri": "/test/{tenant_id}",
  "auth_type": "APP",
  "auth_opt": {
    "app_code_auth_type": "HEADER"
  },
  "tags": ["APIG-SN-test", "test"],
  "cors": false,
  "match_mode": "NORMAL",
  "backend_type": "HTTP",
  "group_id": "f71f69876f90456ca6fd18ed012fdc11",
  "result_normal_sample": "hello world!",
  "id": "81efcfd94b8747a0b21e8c04144a4e8c",
  "status": 1,
  "arrange_necessary": 2,
  "register_time": "2018-08-15T03:41:11.0239936Z",
  "update_time": "2018-08-15T03:41:11.0239936Z",
  "group_name": "group0002",
  "backend_api": {
    "url_domain": "xxxxxxxxxx",
    "req_protocol": "HTTP",
    "req_method": "GET",
    "req_uri": "/test",
    "timeout": 1000,
    "vpc_status": 2,
    "id": "3442ffd031814e3a8f133a9f1ea08453",
    "status": 1,
    "register_time": "2018-08-15T03:41:11.1019236Z",
    "update_time": "2018-08-15T03:41:11.1019236Z"
  },
  "req_params": [
    {
      "name": "tenant_id",
      "type": "STRING",
      "location": "PATH",
      "required": 1,
      "valid_enable": 2,
      "id": "593c5560e0924e00af08fb458f850ecb"
    },
    {
      "name": "city",
      "type": "STRING",
      "location": "QUERY",
      "required": 2,
      "valid_enable": 2,
      "id": "e0b91bc81ae54f8ea850848d782d6e1e"
    }
  ],
  "backend_params": [
    {
      "name": "tenant_id",
```

```

"location": "QUERY",
"origin": "REQUEST",
"value": "tenant_id",
"id": "44e03de2351e43a8b18ba9ec1e71d2e9",
"req_param_id": "593c5560e0924e00af08fb458f850ecb"
},
{
"name": "city",
"location": "QUERY",
"origin": "REQUEST",
"value": "city",
"id": "b60fbc5b86f4f5c8705c445b9bd6325",
"req_param_id": "e0b91bc81ae54f8ea850848d782d6e1e"
}
],
"policy_https": [{
"conditions": [{
"id": "44e03de2351e43a8b18ba9ec1e71d2e9",
"condition_type": "pattern",
"condition_value": "^[0-9]$",
"condition_origin": "param",
"req_param_name": "project_id",
"req_param_id": "b60fbc5b86f4f5c8705c445b9sda325",
"req_param_location": "PATH"
}],
"backend_params": [{
"name": "project_id",
"value": "bbbb",
"location": "QUERY",
"origin": "REQUEST",
"id": "44e03de2351e43a8b18ba9ec1e71d2e8",
"req_param_id": "593c5560e0924e00af08fb458f850ecb"
}],
"effect_mode": "ANY",
"id": "44e03de2351e43a8b18ba9ec1e71d2e8",
"name": "policy001",
"req_method": "GET",
"req_protocol": "http",
"req_uri": "/test/policy",
"timeout": 10000,
"url_domain": "xxxxxxxxxx",
"vpc_status": 2
}]
}

```

Status Codes

Table 4-61 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.2.3 Modifying an API

Function

This API is used to modify the information about an API, including its backend information.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-62 HTTP/HTTPS request method and URI

Request Method	URI
PUT	/v1.0/apigw/apis/{id}

The following table lists the parameter in the URI.

Table 4-63 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	API ID, which can be obtained by querying the API information

Request

Table 4-64 Parameter description

Parameter	Mandatory	Type	Description
group_id	No	String	ID of the API group to which the API belongs. The value of this parameter cannot be modified.
name	Yes	String	API name An API name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
type	Yes	Integer	Indicates whether the API is available to the public. The value can be: <ul style="list-style-type: none"> 1: public
version	No	String	Version of the API A maximum of 16 characters are allowed.

Parameter	Mandatory	Type	Description
req_protocol	No	String	Request protocol, which can be: <ul style="list-style-type: none"> • HTTP • HTTPS • BOTH: The API can be accessed through both HTTP and HTTPS. • WEBSOCKET Default value: HTTPS
req_method	Yes	String	Request method, which can be: <ul style="list-style-type: none"> • GET • POST • PUT • DELETE • HEAD • PATCH • OPTIONS • ANY
req_uri	Yes	String	Access address NOTE The value of this parameter must comply with URI specifications.
match_mode	No	String	Route matching mode, which can be: <ul style="list-style-type: none"> • SWA: prefix match • NORMAL: exact match Default value: NORMAL
remark	No	String	Description of the API The description cannot exceed 255 characters.
auth_type	Yes	String	Security authentication mode, which can be: <ul style="list-style-type: none"> • NONE • APP • IAM • AUTHORIZER
auth_opt	No	Dictionary	Security authentication mode parameter
authorizer_id	No	String	ID of the frontend custom authorizer

Parameter	Mandatory	Type	Description
backend_type	Yes	String	Backend type, which can be: <ul style="list-style-type: none"> • HTTP: web backend • FUNCTION: FunctionGraph backend • MOCK: Mock backend
tag	No	String	Service name tag This field will be discarded.
tags	No	[]String	API tags Optional. This parameter contains a service name tag and other tags. The service name tag must start with APIG-SN-. Other tags cannot start with APIG-SN-.
cors	No	Bool	Indicates whether CORS is supported. <ul style="list-style-type: none"> • TRUE: supported • FALSE: not supported Default value: FALSE
body_remark	No	String	Description of the API request body, which can be an example request body, media type, or parameter information The description cannot exceed 20,480 characters.
result_normal_sample	No	String	Example response for a successful request The length cannot exceed 20,480 characters.
result_failure_sample	No	String	Example response for a failed request The length cannot exceed 20,480 characters.
response_id	No	String	ID of the gateway response
backend_api	Required if backend_type is set to HTTP .	Dictionary	Web backend details

Parameter	Mandatory	Type	Description
mock_info	Required if backend_type is set to MOCK .	Dictionary	Mock backend details
func_info	Required if backend_type is set to FUNCTION .	Dictionary	FunctionGraph backend details
req_params	No	Dictionary	Request parameter list
backend_params	No	Dictionary	Backend parameter list
policy_https	Optional if backend_type is set to HTTP .	Dictionary	Web backend policy list
policy_mocks	Optional if backend_type is set to MOCK .	Dictionary	Mock backend policy list
policy_functions	Optional if backend_type is set to FUNCTION .	Dictionary	FunctionGraph backend policy list

Table 4-65 Parameter description of backend_api

Parameter	Mandatory	Type	Description
url_domain	Required when no VPC channel is used.	String	Backend endpoint An endpoint URL is in the format of "domain name (or IP address):port number", with up to 255 characters. For example, apig.example.com:7443 . By default, the port number would be 443 for HTTPS or 80 for HTTP if it is not specified. An endpoint can contain environment variables, each starting with a letter and consisting of 3–32 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed in environment variables.
version	No	String	Web backend version A maximum of 16 characters are allowed.
req_protocol	Yes	String	Request protocol, which can be: <ul style="list-style-type: none"> • HTTP • HTTPS
req_method	Yes	String	Request method, which can be: <ul style="list-style-type: none"> • GET • POST • PUT • DELETE • HEAD • PATCH • OPTIONS • ANY
req_uri	Yes	String	Request address NOTE The value of this parameter must comply with URI specifications.
timeout	Yes	Integer	Timeout duration for API Gateway to request for the backend service. Range: 1–60,000. Unit: ms. Default value: 45000 . This value will be used if the specified value is outside the allowable range.
remark	No	String	Description of the web backend The description cannot exceed 255 characters.

Parameter	Mandatory	Type	Description
vpc_status	No	Integer	Indicates whether to use a VPC channel. The value can be: <ul style="list-style-type: none"> 1: yes 2: no
vpc_info	Required if vpc_status is set to 1.	Dictionary	VPC channel details
authorizer_id	No	String	ID of the backend custom authorizer

Table 4-66 VPC channel parameter description

Parameter	Mandatory	Type	Description
vpc_id	Yes	String	VPC channel ID
vpc_proxy_host	No	String	Proxy host

Table 4-67 Parameter description of mock_info

Parameter	Mandatory	Type	Description
result_content	No	String	Mock response
version	No	String	Version of the Mock backend A maximum of 64 characters are allowed.
remark	No	String	Description of the Mock backend The description cannot exceed 255 characters.

Table 4-68 Parameter description of func_info

Parameter	Mandatory	Type	Description
function_urn	Yes	String	Function URN
invocation_type	Yes	String	Invocation mode, which can be async or sync
timeout	Yes	Integer	Timeout duration for API Gateway to request for FunctionGraph. Range: 1–60,000. Unit: ms. Default value: 45000 . This value will be used if the specified value is outside the allowable range.
version	No	String	Function version A maximum of 64 characters are allowed.
remark	No	String	Description of the function The description cannot exceed 255 characters.

Table 4-69 Parameter description of req_params

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name A parameter name consists of 1–32 characters, starting with a letter. Only letters, digits, periods (.), hyphens (-), and underscores (_) are allowed.
type	Yes	String	Parameter type, which can be: <ul style="list-style-type: none"> • STRING • NUMBER
location	Yes	String	Parameter location, which can be: <ul style="list-style-type: none"> • PATH • QUERY • HEADER
default_value	No	String	Default value
sample_value	No	String	Example value

Parameter	Mandatory	Type	Description
required	No	Integer	Indicates whether the parameter is mandatory. <ul style="list-style-type: none"> • 1: yes • 2: no The value of this parameter is 1 if Location is set to PATH and 2 if Location is set to another value.
valid_enable	No	Integer	Indicates whether validity check is enabled. <ul style="list-style-type: none"> • 1: enabled • 2: disabled The default value is 2 .
remark	No	String	Description of the parameter The description cannot exceed 255 characters.
enumerations	No	String	Enumerated value
min_num	No	Integer	Minimum value, which is valid when the parameter type is NUMBER
max_num	No	Integer	Maximum value, which is valid when the parameter type is NUMBER
min_size	No	Integer	Minimum length
max_size	No	Integer	Maximum length
regular	No	String	Regular verification rule (currently not supported)
json_schema	No	String	JSON verification rule (currently not supported)

Table 4-70 Parameter description of backend_params

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name A parameter name consists of 1–32 characters, starting with a letter. Only letters, digits, periods (.), hyphens (-), and underscores (_) are allowed.

Parameter	Mandatory	Type	Description
location	Yes	String	Parameter location, which can be: <ul style="list-style-type: none"> • PATH • QUERY • HEADER
origin	Yes	String	Parameter type, which can be: <ul style="list-style-type: none"> • REQUEST • CONSTANT • SYSTEM
value	Yes	String	Parameter value, which can contain not more than 255 characters If origin is set to REQUEST , the value is the parameter name in req_params . If origin is set to CONSTANT , the value is the real value of the backend parameter. If origin is set to SYSTEM , the value is the name of the gateway parameter.
remark	No	String	Description of the parameter The description cannot exceed 255 characters.

Table 4-71 Parameter description of policy_https

Parameter	Mandatory	Type	Description
name	Yes	String	Backend name A backend name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.

Parameter	Mandatory	Type	Description
url_domain	Required when no VPC channel is used.	String	<p>Endpoint of the policy backend</p> <p>An endpoint consists of a domain name or IP address and a port number, with not more than 255 characters. It must be in the format "<i>Domain name.Port number</i>", for example, apig.example.com:7443. By default, the port number would be 443 for HTTPS or 80 for HTTP if it is not specified.</p> <p>An endpoint can contain environment variables, each starting with a letter and consisting of 3–32 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed in environment variables.</p>
req_protocol	Yes	String	<p>Request protocol, which can be:</p> <ul style="list-style-type: none"> • HTTP • HTTPS
req_method	Yes	String	<p>Request method, which can be:</p> <ul style="list-style-type: none"> • GET • POST • PUT • DELETE • HEAD • PATCH • OPTIONS • ANY
req_uri	Yes	String	<p>Request address</p> <p>A request address can contain up to 512 characters and must comply with URI specifications.</p> <p>The request address can contain environment variables, each starting with a letter and consisting of 3–32 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed in environment variables.</p> <p>NOTE The value of this parameter must comply with URI specifications.</p>

Parameter	Mandatory	Type	Description
timeout	No	Integer	Timeout duration for API Gateway to request for the backend service. Range: 1–60,000. Unit: ms. Default value: 45000 . This value will be used if the specified value is outside the allowable range.
vpc_status	No	Integer	Indicates whether to use a VPC channel. The value can be: <ul style="list-style-type: none"> • 1: yes • 2: no
vpc_info	Required if vpc_status is set to 1.	Dictionary	VPC channel details
effect_mode	Yes	String	Effective mode of the backend policy <ul style="list-style-type: none"> • ALL • ANY
conditions	Yes	Dictionary	Policy condition list
backend_params	No	Dictionary	Backend parameter list

Table 4-72 Parameter description of policy_mocks

Parameter	Mandatory	Type	Description
name	Yes	String	Backend name A backend name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
result_content	No	String	Mock response
effect_mode	Yes	String	Effective mode of the backend policy <ul style="list-style-type: none"> • ALL • ANY
conditions	Yes	Dictionary	Policy condition list

Parameter	Mandatory	Type	Description
backend_params	No	Dictionary	Backend parameter list

Table 4-73 Parameter description of policy_functions

Parameter	Mandatory	Type	Description
name	Yes	String	Backend name A backend name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
function_urn	Yes	String	Function URN
invocation_type	Yes	String	Invocation mode, which can be async or sync
timeout	No	Integer	Timeout duration for API Gateway to request for FunctionGraph. Range: 1–60,000. Unit: ms. Default value: 45000 . This value will be used if the specified value is outside the allowable range.
version	No	String	Function version A maximum of 64 characters are allowed.
effect_mode	Yes	String	Effective mode of the backend policy <ul style="list-style-type: none"> • ALL • ANY
conditions	Yes	Dictionary	Policy condition list
backend_params	No	Dictionary	Backend parameter list

Table 4-74 Parameter description of conditions

Parameter	Mandatory	Type	Description
condition_type	Mandatory if the policy type is param .	String	Condition type. Options: <ul style="list-style-type: none"> • exact: Exact match • enum: Enumeration • pattern: Regular expression
condition_value	Yes	String	Condition value
condition_origin	Yes	String	Condition source. Options: <ul style="list-style-type: none"> • param: Input parameter • source: Source IP address
req_param_name	Mandatory if the policy type is param .	String	Input parameter name

Table 4-75 Parameter description of auth_opt

Parameter	Mandatory	Type	Description
app_code_auth_type	No	String	Indicates whether AppCode authentication is enabled. This parameter is valid only when auth_type is set to App . The default value is DISABLE . <ul style="list-style-type: none"> • DISABLE: AppCode authentication is disabled. • HEADER: AppCode authentication is enabled and the AppCode is located in the header.

Example request:

```
{
  "auth_type": "app",
  "auth_opt": {
    "app_code_auth_type": "HEADER"
  },
  "backend_api": {
    "req_method": "get",
    "req_protocol": "http",
    "req_uri": "/test",
    "timeout": 1000,
    "url_domain": "xxxxxxxxx"
  }
}
```

```

},
"backend_params": [
  {
    "location": "query",
    "name": "project_id",
    "origin": "request",
    "value": "project_id"
  },
  {
    "location": "query",
    "name": "city",
    "origin": "request",
    "value": "city"
  }
],
"backend_type": "http",
"group_id": "f71f69876f90456ca6fd18ed012fdc11",
"name": "test",
"req_method": "get",
"req_params": [
  {
    "location": "path",
    "name": "project_id",
    "required": 1,
    "type": "string"
  },
  {
    "location": "query",
    "name": "city",
    "required": 2,
    "type": "string"
  }
],
"req_uri": "/test/{project_id}",
"tags": ["APIG-SN-test", "test"],
"type": 1,
"result_normal_sample": "hello world!"
}

```

Response

Table 4-76 Parameter description

Parameter	Type	Description
id	String	API ID
name	String	API name
group_id	String	ID of the API group to which the API belongs
group_name	String	Name of the API group to which the API belongs
status	Integer	API status
type	Integer	API type
version	String	API version
req_protocol	String	Request protocol
req_method	String	Request method

Parameter	Type	Description
req_uri	String	Access address
auth_type	String	Security authentication mode
auth_opt	Object	Security authentication mode parameter
match_mode	String	Matching mode
register_time	Timestamp	Time when the API is registered
update_time	Timestamp	Time when the API was last modified
remark	String	Description of the API
backend_type	String	Backend type
run_env_name	String	Name of the environment in which the API has been published
run_env_id	String	ID of the environment in which the API has been published
publish_id	String	ID of the publication record
arrange_necessary	Integer	Indicates whether orchestration is required.
tag	String	Service name tag, which is to be discarded
tags	[]String	API tags
cors	Bool	Indicates whether CORS is supported.
body_remark	String	Description of the API request body, which can be an example request body, media type, or parameter information
result_normal_sample	String	Example response for a successful request
result_failure_sample	String	Example response for a failed request
response_id	String	ID of the gateway response
backend_api	Dictionary	Web backend details
mock_info	Dictionary	Mock backend details
func_info	Dictionary	FunctionGraph backend details
req_params	Dictionary	Request parameter list
backend_params	Dictionary	Backend parameter list
policy_https	Dictionary	Web backend policy list

Parameter	Type	Description
policy_mocks	Dictionary	Mock backend policy list
policy_functions	Dictionary	FunctionGraph backend policy list

Table 4-77 Parameter description of backend_api

Parameter	Type	Description
id	String	Web backend ID
status	Integer	Web backend status
url_domain	String	Backend endpoint
version	String	Web backend version
req_protocol	String	Request protocol
req_method	String	Request method
req_uri	String	Access address
timeout	Integer	Timeout duration in milliseconds
register_time	Timestamp	Time when the web backend is registered
update_time	Timestamp	Time when the web backend was last modified
remark	String	Description of the web backend
vpc_status	String	Indicates whether to use a VPC channel.
vpc_info	String	VPC channel information

Table 4-78 Parameter description of mock_info

Parameter	Type	Description
id	String	Mock backend ID
status	Integer	Mock backend status
version	String	Version of the Mock backend
result_content	String	Mock response
register_time	Timestamp	Time when the Mock backend is registered
update_time	Timestamp	Time when the Mock backend was last modified
remark	String	Description of the Mock backend

Table 4-79 Parameter description of func_info

Parameter	Type	Description
id	String	Function ID
status	Integer	Function status
version	String	Function version
function_urn	String	Function URN
invocation_type	String	Invocation mode, which can be async or sync
register_time	Timestamp	Time when the function is registered
update_time	Timestamp	Time when the function was last updated
timeout	Integer	Timeout duration in milliseconds
remark	String	Description of the function

Table 4-80 Parameter description of req_params

Parameter	Type	Description
id	String	Parameter ID
name	String	Parameter name
type	String	Parameter type
location	String	Parameter location
default_value	String	Default value
sample_value	String	Example value
required	Integer	Indicates whether the parameter is mandatory.
valid_enable	Integer	Indicates whether validity check is enabled.
remark	String	Description of the parameter
enumerations	String	Enumerated value
min_num	Integer	Minimum value, which is valid when the parameter type is NUMBER
max_num	Integer	Maximum value, which is valid when the parameter type is NUMBER
min_size	Integer	Minimum length
max_size	Integer	Maximum length

Parameter	Type	Description
regular	String	Regular verification rule (currently not supported)
json_schema	String	JSON verification rule (currently not supported)

Table 4-81 Parameter description of backend_params

Parameter	Type	Description
id	String	Parameter ID
req_param_id	String	ID of the request parameter to which the backend parameter is mapped
name	String	Parameter name
location	String	Parameter location
origin	String	Parameter type
value	String	Parameter value
remark	String	Description of the parameter

Table 4-82 Parameter description of policy_https

Parameter	Type	Description
id	String	Backend policy ID
name	String	Backend name
url_domain	String	Endpoint of the policy backend
req_protocol	String	Request protocol
req_method	String	Request method
req_uri	String	Access address
timeout	Integer	Timeout duration in milliseconds
vpc_status	String	Indicates whether to use a VPC channel.
vpc_info	String	VPC channel information
effect_mode	String	Effective mode of the backend policy
conditions	Dictionary	Policy condition list
backend_params	Dictionary	Backend parameter list

Table 4-83 Parameter description of policy_mocks

Parameter	Type	Description
id	String	Backend policy ID
name	String	Backend name
result_content	String	Mock response
effect_mode	String	Effective mode of the backend policy
conditions	Dictionary	Policy condition list
backend_params	Dictionary	Backend parameter list

Table 4-84 Parameter description of policy_functions

Parameter	Type	Description
id	String	Backend policy ID
name	String	Backend name
version	String	Function version
function_urn	String	Function URN
invocation_type	String	Invocation mode, which can be async or sync
timeout	Integer	Timeout duration in milliseconds
effect_mode	String	Effective mode of the backend policy
conditions	Dictionary	Policy condition list
backend_params	Dictionary	Backend parameter list

Table 4-85 Parameter description of conditions

Parameter	Type	Description
id	String	Backend policy condition ID
condition_type	String	Condition type
condition_value	String	Condition value

Parameter	Type	Description
condition_origin	String	Condition source
req_param_name	String	Input parameter name
req_param_id	String	Input parameter ID
req_param_location	String	Input parameter location

Table 4-86 Parameter description of auth_opt

Parameter	Type	Description
app_code_auth_type	String	Indicates whether AppCode authentication is enabled.

Example response:

```
{
  "name": "test",
  "type": 1,
  "version": "V0.0.1",
  "req_protocol": "HTTPS",
  "req_method": "GET",
  "req_uri": "/test/{tenant_id}",
  "auth_type": "APP",
  "auth_opt": {
    "app_code_auth_type": "DISABLE"
  },
  "tags": ["APIG-SN-test", "test"],
  "cors": false,
  "match_mode": "NORMAL",
  "backend_type": "HTTP",
  "group_id": "f71f69876f90456ca6fd18ed012fdc11",
  "result_normal_sample": "hello world!",
  "id": "81efcfd94b8747a0b21e8c04144a4e8c",
  "status": 1,
  "arrange_necessary": 2,
  "register_time": "2018-08-15T03:41:11.0239936Z",
  "update_time": "2018-08-15T03:41:11.0239936Z",
  "group_name": "group0002",
  "backend_api": {
    "url_domain": "xxxxxxxxxx",
    "req_protocol": "HTTP",
    "req_method": "GET",
    "req_uri": "/test",
    "timeout": 1000,
    "vpc_status": 2,
    "id": "3442ffd031814e3a8f133a9f1ea08453",
    "status": 1,
    "register_time": "2018-08-15T03:41:11.1019236Z",
    "update_time": "2018-08-15T03:41:11.1019236Z"
  },
  "req_params": [
    {
      "name": "tenant_id",
```

```
"type": "STRING",
"location": "PATH",
"required": 1,
"valid_enable": 2,
"id": "593c5560e0924e00af08fb458f850ecb"
},
{
  "name": "city",
  "type": "STRING",
  "location": "QUERY",
  "required": 2,
  "valid_enable": 2,
  "id": "e0b91bc81ae54f8ea850848d782d6e1e"
}
],
"backend_params": [
  {
    "name": "tenant_id",
    "location": "QUERY",
    "origin": "REQUEST",
    "value": "tenant_id",
    "id": "44e03de2351e43a8b18ba9ec1e71d2e9",
    "req_param_id": "593c5560e0924e00af08fb458f850ecb"
  },
  {
    "name": "city",
    "location": "QUERY",
    "origin": "REQUEST",
    "value": "city",
    "id": "b60fbc5b86f4f5c8705c445b9bd6325",
    "req_param_id": "e0b91bc81ae54f8ea850848d782d6e1e"
  }
],
"policy_https": [{
  "conditions": [{
    "id": "44e03de2351e43a8b18ba9ec1e71d2e9",
    "condition_type": "pattern",
    "condition_value": "^[0-9]$",
    "condition_origin": "param",
    "req_param_name": "project_id",
    "req_param_id": "b60fbc5b86f4f5c8705c445b9sda325",
    "req_param_location": "PATH"
  }],
  "backend_params": [{
    "name": "project_id",
    "value": "bbbb",
    "location": "QUERY",
    "origin": "REQUEST",
    "id": "44e03de2351e43a8b18ba9ec1e71d2e8",
    "req_param_id": "593c5560e0924e00af08fb458f850ecb"
  }],
  "effect_mode": "ANY",
  "id": "44e03de2351e43a8b18ba9ec1e71d2e8",
  "name": "policy001",
  "req_method": "GET",
  "req_protocol": "http",
  "req_uri": "/test/policy",
  "timeout": 10000,
  "url_domain": "xxxxxxxxxx",
  "vpc_status": 2
}]
}
```

Status Codes

Table 4-87 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
409	Conflict
500	Server Internal Error

4.2.4 Deleting an API

Function

This API is used to delete an API.

This operation will delete all related resources and binding relationships of the API, such as publication records, backend services, and app authorization information.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-88 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/apis/{id}

The following table lists the parameter in the URI.

Table 4-89 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	API ID

Request

N/A

Response

N/A

Status Codes

Table 4-90 Status codes

Status Code	Description
204	No Content
401	Unauthorized
403	Forbidden
404	Not Found
409	Conflict
500	Server Internal Error

4.2.5 Publishing an API

Function

This API is used to publish an API in a specified environment. An API can be called in an environment only after it is published in it. APIs that have not been published cannot be called.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-91 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/apis/publish/{api_id}

The following table lists the parameter in the URI.

Table 4-92 Parameter description

Parameter	Mandatory	Type	Description
api_id	Yes	String	API ID

Request

Table 4-93 Parameter description

Parameter	Mandatory	Type	Description
env_id	Yes	String	ID of the environment in which the API will be published
remark	No	String	Description about the publication The description cannot exceed 255 characters.

Example request:

```
{
  "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
  "remark": "Published in the production environment"
}
```

Response

Table 4-94 Parameter description

Parameter	Type	Description
publish_id	String	ID of the publication record
api_id	String	API ID
env_id	String	ID of the environment in which the API has been published
remark	String	Description about the publication
publish_time	Timestamp	Time when the API is published
version_id	String	API version

Example response:

```
{
  "publish_id": "5b729aa252764739be2c37ef0d66dc63",
  "api_id": "7addcd00cfab433984b1d8bf2fe08aaa",
  "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
}
```

```
"version_id": "3d9dcb733ba34352b0d02f85fd16b026",
"remark": "string",
"publish_time": "2018-07-26T13:18:04.1079916Z"
}
```

Status Codes

Table 4-95 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.2.6 Taking an API Offline

Function

This API is used to remove an API from an environment in which it has been published. After this operation, the API can no longer be called in the environment.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-96 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/apis/publish/{api_id}[?env_id]

The following table lists the parameters in the URI.

Table 4-97 Parameter description

Parameter	Mandatory	Type	Description
api_id	Yes	String	API ID

Parameter	Mandatory	Type	Description
env_id	Yes	String	ID of the environment in which the API has been published

Request

N/A

Response

N/A

Status Codes

Table 4-98 Status codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
409	Conflict
500	Server Internal Error

4.2.7 Publishing Multiple APIs or Taking Multiple APIs Offline

Function

This API is used to publish multiple APIs in an environment or to remove multiple APIs from the environment in which they have been published.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-99 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/apis/publish[?action]

The following table lists the parameter in the URI.

Table 4-100 Parameter description

Parameter	Mandatory	Type	Description
action	No	String	online: publish offline: take offline

Request

Table 4-101 Parameter description

Parameter	Mandatory	Type	Description
apis	Yes	String Array	IDs of the APIs to be published or taken offline
env_id	Yes	String	Environment ID
remark	No	String	Description of the publication The description cannot exceed 255 characters.

Example request:

```
{
  "apis": ["81efcd94b8747a0b21e8c04144a4e8c","7addcd00cfab433984b1d8bf2fe08aaa"],
  "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
  "remark": "Published in the production environment"
}
```

Response

Table 4-102 Parameter description

Parameter	Type	Description
success	Array	Message for successful API publication or taking offline

Parameter	Type	Description
failure	Array	Error message and APIs that fail to be published or taken offline

Table 4-103 Parameter description of success (batch publishing)

Parameter	Type	Description
publish_id	String	Publication record ID
api_id	String	ID of a successfully published API
api_name	String	Name of the API
env_id	String	ID of the environment in which the API has been published
remark	String	Description of the publication
publish_time	Timestamp	Time when the API is published
version_id	String	API version

Table 4-104 Parameter description of success (taking offline in batches)

Parameter	Type	Description
api_id	String	ID of an API that is successfully taken offline
api_name	String	Name of the API

Table 4-105 Parameter description of failure

Parameter	Type	Description
api_id	String	ID of an API that fails to be published or taken offline
api_name	String	Name of the API
error_code	String	Error code
error_msg	String	Error message

Example response:

```
{
  "success": [{
    "publish_id": "5b729aa252764739be2c37ef0d66dc63",
    "api_id": "7addcd00cfab433984b1d8bf2fe08aaa",
```

```

    "api_name": "testApi",
    "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
    "version_id": "3d9dcb733ba34352b0d02f85fd16b026",
    "remark": "string",
    "publish_time": "2018-07-26T13:18:04.1079916Z"
  }],
  "failure": [{
    "api_id": "81efcfd94b8747a0b21e8c04144a4e8c",
    "error_code": "APIG.3002",
    "error_msg": "api with id 81efcfd94b8747a0b21e8c04144a4e8c not found"
  }]
}

```

Status Codes

Table 4-106 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.2.8 Querying API Details

Function

This API is used to query the details of a specified API.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-107 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/apis/{id}

The following table lists the parameters in the URI.

Table 4-108 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	API ID

Request

N/A

Response

Table 4-109 Parameter description

Parameter	Type	Description
id	String	API ID
name	String	API name
group_id	String	ID of the API group to which the API belongs
group_name	String	Name of the API group to which the API belongs
status	Integer	API status
type	Integer	API type
version	String	API version
req_protocol	String	Request protocol
req_method	String	Request method
req_uri	String	Access address
auth_type	String	Security authentication mode
auth_opt	Object	Security authentication mode parameter
authorizer_id	String	ID of the frontend custom authorizer
match_mode	String	Matching mode
register_time	Timestamp	Time when the API is registered
update_time	Timestamp	Time when the API was last modified
remark	String	API description
backend_type	String	Backend type
run_env_name	String	Name of the environment in which the API has been published

Parameter	Type	Description
run_env_id	String	ID of the environment in which the API has been published
publish_id	String	ID of the publication record
arrange_necessary	Integer	Indicates whether orchestration is required.
tag	String	Service name tag, which is to be discarded
tags	[]String	API tags
cors	Bool	Indicates whether CORS is supported.
body_remark	String	Description of the API request body, which can be an example request body, media type, or parameter information
result_normal_sample	String	Example response for a successful request
result_failure_sample	String	Example response for a failed request
response_id	String	ID of the gateway response
backend_api	Dictionary	Web backend details
mock_info	Dictionary	Mock backend details
func_info	Dictionary	FunctionGraph backend details
req_params	Dictionary	Request parameter list
backend_params	Dictionary	Backend parameter list
policy_https	Dictionary	Web backend policy list
policy_mocks	Dictionary	Mock backend policy list
policy_functions	Dictionary	FunctionGraph backend policy list

Table 4-110 Parameter description of backend_api

Parameter	Type	Description
id	String	Web backend ID
status	Integer	Web backend status
url_domain	String	Backend endpoint
version	String	Web backend version

Parameter	Type	Description
req_protocol	String	Request protocol
req_method	String	Request method
req_uri	String	Access address
timeout	Integer	Timeout duration in milliseconds
register_time	Timestamp	Time when the web backend is registered
update_time	Timestamp	Time when the web backend was last modified
remark	String	Description of the web backend
vpc_status	String	Indicates whether to use a VPC channel.
vpc_info	String	VPC channel information
authorizer_id	String	ID of the backend custom authorizer

Table 4-111 Parameter description of mock_info

Parameter	Type	Description
id	String	Mock backend ID
status	Integer	Mock backend status
version	String	Mock backend version
result_content	String	Mock response
register_time	Timestamp	Time when the Mock backend is registered
update_time	Timestamp	Time when the Mock backend was last modified
remark	String	Description of the Mock backend

Table 4-112 Parameter description of func_info

Parameter	Type	Description
id	String	Function ID
status	Integer	Function status
version	String	Function version
function_urn	String	Function URN
invocation_type	String	Invocation mode, which can be async or sync

Parameter	Type	Description
register_time	Timestamp	Time when the function is registered
update_time	Timestamp	Time when the function was last updated
timeout	Integer	Timeout duration in milliseconds
remark	String	Description of the function

Table 4-113 Parameter description of req_params

Parameter	Type	Description
id	String	Parameter ID
name	String	Parameter name
type	String	Parameter type
location	String	Parameter location
default_value	String	Default value
sample_value	String	Example value
required	Integer	Indicates whether the parameter is mandatory. The value can be: <ul style="list-style-type: none"> • 1: yes • 2: no
valid_enable	Integer	Indicates whether validity check is enabled.
remark	String	Description of the parameter
enumerations	String	Enumerated value
min_num	Integer	Minimum value, which is valid when the parameter type is NUMBER
max_num	Integer	Maximum value, which is valid when the parameter type is NUMBER
min_size	Integer	Minimum length
max_size	Integer	Maximum length
regular	String	Regular verification rule (currently not supported)
json_schema	String	JSON verification rule (currently not supported)

Table 4-114 Parameter description of backend_params

Parameter	Type	Description
id	String	Parameter ID
req_param_id	String	ID of the request parameter to which the backend parameter is mapped
name	String	Parameter name
location	String	Parameter location
origin	String	Parameter type
value	String	Parameter value
remark	String	Description of the parameter

Table 4-115 Parameter description of policy_https

Parameter	Type	Description
id	String	Backend policy ID
name	String	Backend name
url_domain	String	Endpoint of the policy backend
req_protocol	String	Request protocol
req_method	String	Request method
req_uri	String	Access address
timeout	Integer	Timeout duration in milliseconds
vpc_status	String	Indicates whether to use a VPC channel.
vpc_info	String	VPC channel information
effect_mode	String	Effective mode of the backend policy
conditions	Dictionary	Policy condition list
backend_params	Dictionary	Backend parameter list

Table 4-116 Parameter description of policy_mocks

Parameter	Type	Description
id	String	Backend policy ID
name	String	Backend name

Parameter	Type	Description
result_content	String	Mock response
effect_mode	String	Effective mode of the backend policy
conditions	Dictionary	Policy condition list
backend_params	Dictionary	Backend parameter list

Table 4-117 Parameter description of policy_functions

Parameter	Type	Description
id	String	Backend policy ID
name	String	Backend name
version	String	Function version
function_urn	String	Function URN
invocation_type	String	Invocation mode, which can be async or sync
timeout	Integer	Timeout duration in milliseconds
effect_mode	String	Effective mode of the backend policy
conditions	Dictionary	Policy condition list
backend_params	Dictionary	Backend parameter list

Table 4-118 Parameter description of conditions

Parameter	Type	Description
id	String	Backend policy condition ID
condition_type	String	Condition type
condition_value	String	Condition value
condition_origin	String	Condition source
req_param_name	String	Input parameter name
req_param_id	String	Input parameter ID

Parameter	Type	Description
req_param_location	String	Input parameter location

Table 4-119 Parameter description of auth_opt

Parameter	Type	Description
app_code_auth_type	String	Indicates whether AppCode authentication is enabled.

Example response:

```
{
  "name": "test",
  "type": 1,
  "version": "V0.0.1",
  "req_protocol": "HTTPS",
  "req_method": "GET",
  "req_uri": "/test/{tenant_id}",
  "auth_type": "APP",
  "auth_opt": {
    "app_code_auth_type": "DISABLE"
  },
  "tags": ["APIG-SN-test", "test"],
  "cors": false,
  "match_mode": "NORMAL",
  "backend_type": "HTTP",
  "group_id": "f71f69876f90456ca6fd18ed012fdc11",
  "result_normal_sample": "hello world!",
  "id": "81efcfd94b8747a0b21e8c04144a4e8c",
  "status": 1,
  "arrange_necessary": 2,
  "register_time": "2018-08-15T03:41:11.0239936Z",
  "update_time": "2018-08-15T03:41:11.0239936Z",
  "group_name": "group0002",
  "backend_api": {
    "url_domain": "xxxxxxxxxx",
    "req_protocol": "HTTP",
    "req_method": "GET",
    "req_uri": "/test",
    "timeout": 1000,
    "vpc_status": 2,
    "id": "3442ffd031814e3a8f133a9f1ea08453",
    "status": 1,
    "register_time": "2018-08-15T03:41:11.1019236Z",
    "update_time": "2018-08-15T03:41:11.1019236Z"
  },
  "req_params": [
    {
      "name": "tenant_id",
      "type": "STRING",
      "location": "PATH",
      "required": 1,
      "valid_enable": 2,
      "id": "593c5560e0924e00af08fb458f850ecb"
    },
    {
      "name": "city",
      "type": "STRING",

```

```

"location": "QUERY",
"required": 2,
"valid_enable": 2,
"id": "e0b91bc81ae54f8ea850848d782d6e1e"
}
],
"backend_params": [
{
"name": "tenant_id",
"location": "QUERY",
"origin": "REQUEST",
"value": "tenant_id",
"id": "44e03de2351e43a8b18ba9ec1e71d2e9",
"req_param_id": "593c5560e0924e00af08fb458f850ecb"
},
{
"name": "city",
"location": "QUERY",
"origin": "REQUEST",
"value": "city",
"id": "b60fbc5b86f4f5c8705c445b9bd6325",
"req_param_id": "e0b91bc81ae54f8ea850848d782d6e1e"
}
],
"policy_https": [{
"conditions": [{
"id": "44e03de2351e43a8b18ba9ec1e71d2e9",
"condition_type": "pattern",
"condition_value": "^[0-9]$",
"condition_origin": "param",
"req_param_name": "project_id",
"req_param_id": "b60fbc5b86f4f5c8705c445b9sda325",
"req_param_location": "PATH"
}],
"backend_params": [{
"name": "project_id",
"value": "bbbb",
"location": "QUERY",
"origin": "REQUEST",
"id": "44e03de2351e43a8b18ba9ec1e71d2e8",
"req_param_id": "593c5560e0924e00af08fb458f850ecb"
}],
"effect_mode": "ANY",
"id": "44e03de2351e43a8b18ba9ec1e71d2e8",
"name": "policy001",
"req_method": "GET",
"req_protocol": "http",
"req_uri": "/test/policy",
"timeout": 10000,
"url_domain": "xxxxxxxxxx",
"vpc_status": 2
}]
}

```

Status Codes

Table 4-120 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized

Status Code	Description
403	Forbidden
404	Not Found

4.2.9 Querying an API List

Function

This API is used to query an API list to return details and publication information of the APIs. Backend information of the APIs will not be returned.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-121 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/apis[?page_size, page_no, id, name, group_id, req_protocol, req_method, req_uri, auth_type, env_id, type,status, tags]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **ID, name, group_id, req_protocol, req_method, req_uri, auth_type, env_id, type, status, tags, page_size, and page_no.**

Request

Table 4-122 Parameter description

Parameter	Mandatory	Type	Description
id	No	String	API ID
name	No	String	API name
group_id	No	String	ID of the API group to which the API belongs
req_protocol	No	String	Request protocol
req_method	No	String	Request method
req_uri	No	String	Request path

Parameter	Mandatory	Type	Description
auth_type	No	String	Security authentication mode
env_id	No	String	ID of the environment in which the API has been published
type	No	Integer	API type
tags	No	String	API tags
page_size	No	Integer	Number of records displayed on each page. The default value is 20 and the maximum value is 500 . When the value of page_size is set to 0 , all APIs are returned.
page_no	No	Integer	Page number. The default value is 1 .
precise_search	No	String	Parameter name (name or req_uri) for exact matching

Response

Table 4-123 Parameter description

Parameter	Type	Description
total	Integer	Number of APIs that match the query conditions
size	Integer	Length of the returned API list
apis	Dictionary	API list

Table 4-124 Parameter description of apis

Parameter	Type	Description
id	String	API ID
name	String	API name
group_id	String	ID of the API group to which the API belongs
group_name	String	Name of the API group to which the API belongs
status	Integer	API status
type	Integer	API type

Parameter	Type	Description
version	String	API version
req_protocol	String	Request protocol
req_method	String	Request method
req_uri	String	Access address
auth_type	String	Security authentication mode
auth_opt	Object	Security authentication mode parameter
authorizer_id	String	ID of the frontend custom authorizer
match_mode	String	Matching mode
register_time	Timestamp	Time when the API is registered
update_time	Timestamp	Time when the API was last modified
remark	String	API description
backend_type	String	Backend type
run_env_name	String	Name of the environment in which the API has been published
run_env_id	String	ID of the environment in which the API has been published
publish_id	String	ID of the publication record
arrange_necessary	Integer	Indicates whether orchestration is required.
cors	Bool	Indicates whether CORS is supported.
tag	String	Service name tag, which is to be discarded
tags	[]String	API tags
response_id	String	ID of the gateway response

Table 4-125 Parameter description of auth_opt

Parameter	Type	Description
app_code_auth_type	String	Indicates whether AppCode authentication is enabled.

Example response:

```
{  
  "total": 3,  
}
```

```
"size": 3,
"apis": [
  {
    "name": "test",
    "type": 1,
    "version": "V0.0.1",
    "req_protocol": "HTTPS",
    "req_method": "GET",
    "req_uri": "/test/{project_id}",
    "auth_type": "APP",
    "auth_opt": {
      "app_code_auth_type": "DISABLE"
    },
    "tags": ["APIG-SN-test", "test"],
    "cors": false,
    "match_mode": "NORMAL",
    "backend_type": "HTTP",
    "group_id": "f71f69876f90456ca6fd18ed012fdc11",
    "id": "81efcfd94b8747a0b21e8c04144a4e8c",
    "status": 1,
    "arrange_necessary": 2,
    "register_time": "2018-08-15T03:41:11Z",
    "update_time": "2018-08-15T03:41:11Z",
    "group_name": "group0002"
  },
  {
    "name": "bbbb",
    "type": 1,
    "version": "0.0.1",
    "req_protocol": "HTTPS",
    "req_method": "GET",
    "req_uri": "/test002",
    "auth_type": "APP",
    "auth_opt": {
      "app_code_auth_type": "DISABLE"
    },
    "tags": ["APIG-SN-test", "test"],
    "cors": false,
    "match_mode": "NORMAL",
    "backend_type": "MOCK",
    "remark": "aaa",
    "group_id": "70f1b578da9b4dfe889b4c33d1b995c2",
    "id": "91c26288acea4448be205265d77dae22",
    "status": 1,
    "arrange_necessary": 2,
    "register_time": "2018-07-27T11:54:24Z",
    "update_time": "2018-07-27T11:54:24Z",
    "group_name": "test001",
    "run_env_name": "RELEASE",
    "run_env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
    "publish_id": "a6e06a00c382436eb524fa2dd343cb6d"
  },
  {
    "name": "aaa",
    "type": 1,
    "version": "0.0.1",
    "req_protocol": "HTTPS",
    "req_method": "GET",
    "req_uri": "/test001",
    "auth_type": "APP",
    "auth_opt": {
      "app_code_auth_type": "DISABLE"
    },
    "tags": ["APIG-SN-test", "test"],
    "cors": false,
    "match_mode": "NORMAL",
    "backend_type": "MOCK",
    "remark": "aaa",
    "group_id": "70f1b578da9b4dfe889b4c33d1b995c2",
```



```

    "id": "aebacac6095942b4b2dd2b209bb7b9bc",
    "status": 1,
    "arrange_necessary": 2,
    "register_time": "2018-07-27T11:23:34Z",
    "update_time": "2018-07-27T11:23:34Z",
    "group_name": "test001",
    "run_env_name": "RELEASE",
    "run_env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
    "publish_id": "1bc8b2b741a04bd4af3ef9d7cd003104"
  }
]
}

```

Status Codes

Table 4-126 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
500	Server Internal Error

4.2.10 Querying Historical API Versions

Function

This API is used to query the historical versions of an API. API Gateway retains a maximum of 10 historical versions for each API in an environment.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-127 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/apis/publish/{api_id}[?env_id,env_name]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **env_id** and **env_name**.

The following table lists the parameters in the URI.

Table 4-128 Parameter description

Parameter	Mandatory	Type	Description
api_id	Yes	String	API ID
env_id	No	String	ID of the environment in which the API has been published
env_name	No	String	Name of the environment in which the API has been published

Request

N/A

Response

Table 4-129 Parameter description

Parameter	Type	Description
total	Integer	Number of historical versions that match the query conditions
size	Integer	Length of the returned historical version list
api_versions	Dictionary	Historical version list

Table 4-130 Parameter description of api_versions

Parameter	Type	Description
version_id	String	API version ID
version_no	String	API version
api_id	String	API ID
env_id	String	ID of the environment in which the API has been published
env_name	String	Name of the environment in which the API has been published
remark	String	Description about the publication
publish_time	Timestamp	Time when the API is published

Parameter	Type	Description
status	Integer	Version status, which can be: <ul style="list-style-type: none"> • Effective • Not effective

Example response:

```
{
  "total": 1,
  "size": 1,
  "api_versions": [
    {
      "version_id": "04c194dc7b5340ed942f2451702060da",
      "version_no": "20180722102526",
      "api_id": "acf141aa6279415088b593a4bbb55eed",
      "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
      "env_name": "RELEASE",
      "publish_time": "2018-04-14T07:32:23Z",
      "status": 2
    }
  ]
}
```

Status Codes

Table 4-131 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.2.11 Taking an Effective Version of an API Offline

Function

This API is used to remove an effective version of an API. After this operation, the API cannot be called in the environment in which it takes effect.

This API is provided for FunctionGraph.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-132 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/apis/versions/{version_id}

The following table lists the parameter in the URI.

Table 4-133 Parameter description

Parameter	Mandatory	Type	Description
version_id	Yes	String	API version ID

Request

N/A

Response

N/A

Status Codes

Table 4-134 Status codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.2.12 Querying Details of an API Version

Function

This API is used to query the details of a specified API version.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-135 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/apis/versions/{version_id}

The following table lists the parameter in the URI.

Table 4-136 Parameter description

Parameter	Mandatory	Type	Description
version_id	Yes	String	API version ID

Request

N/A

Response

Table 4-137 Parameter description

Parameter	Type	Description
id	String	API ID
name	String	API name
group_id	String	ID of the API group to which the API belongs
group_name	String	Name of the API group to which the API belongs
status	Integer	API status
type	Integer	API type
version	String	API version
req_protocol	String	Request protocol
req_method	String	Request method
req_uri	String	Access address
auth_type	String	Security authentication mode
auth_opt	Object	Security authentication mode parameter
authorizer_id	String	ID of the frontend custom authorizer
match_mode	String	Matching mode

Parameter	Type	Description
register_time	Timestamp	Time when the API is registered
update_time	Timestamp	Time when the API was last modified
remark	String	Description of the API
backend_type	String	Backend type
run_env_name	String	Name of the environment in which the API has been published
run_env_id	String	ID of the environment in which the API has been published
publish_id	String	ID of the publication record
arrange_necessary	Integer	Indicates whether orchestration is required.
tag	String	Service name tag, which is to be discarded
tags	[]String	API tags
cors	Bool	Indicates whether CORS is supported.
body_remark	String	Description of the API request body, which can be an example request body, media type, or parameter information
result_normal_sample	String	Example response for a successful request
result_failure_sample	String	Example response for a failed request
response_id	String	ID of the gateway response
sl_domain	String	Subdomain name of the API group
sl_domains	Array of strings	List of subdomain names bound to the API group
version_id	String	API version
publish_time	Timestamp	Time when the API version is published
backend_api	Dictionary	Web backend details
mock_info	Dictionary	Mock backend details
func_info	Dictionary	FunctionGraph backend details
req_params	Dictionary	Request parameter list
backend_params	Dictionary	Backend parameter list

Table 4-138 Parameter description of backend_api

Parameter	Type	Description
id	String	Web backend ID
status	Integer	Web backend status
url_domain	String	Backend endpoint
version	String	Backend version
req_protocol	String	Request protocol
req_method	String	Request method
req_uri	String	Access address
timeout	Integer	Timeout duration in milliseconds
register_time	Timestamp	Time when the web backend is registered
update_time	Timestamp	Time when the web backend was last modified
remark	String	Description of the backend
vpc_status	String	Indicates whether to use a VPC channel.
vpc_info	String	VPC channel information
authorizer_id	String	ID of the backend custom authorizer

Table 4-139 Parameter description of mock_info

Parameter	Type	Description
id	String	Mock backend ID
status	Integer	Mock backend status
version	String	Backend version
result_content	String	Mock response
register_time	Timestamp	Time when the Mock backend is registered
update_time	Timestamp	Time when the Mock backend was last modified
remark	String	Description of the backend

Table 4-140 Parameter description of func_info

Parameter	Type	Description
id	String	Function ID

Parameter	Type	Description
status	Integer	Function status
version	String	Function version
function_urn	String	Function URN
invocation_type	String	Invocation mode, which can be async or sync
register_time	Timestamp	Time when the function is registered
update_time	Timestamp	Time when the function was last updated
timeout	Integer	Timeout duration in milliseconds
remark	String	Description of the function

Table 4-141 Parameter description of req_params

Parameter	Type	Description
id	String	Parameter ID
name	String	Parameter name
type	String	Parameter type
location	String	Parameter location
default_value	String	Default value
sample_value	String	Example value
required	Integer	Indicates whether the parameter is mandatory.
valid_enable	Integer	Indicates whether validity check is enabled.
remark	String	Description of the parameter
enumerations	String	Enumerated value
min_num	Integer	Minimum value, which is valid when the parameter type is NUMBER
max_num	Integer	Maximum value, which is valid when the parameter type is NUMBER
min_size	Integer	Minimum length
max_size	Integer	Maximum length
regular	String	Regular expression validation rule
json_schema	String	JSON validation rule

Table 4-142 Parameter description of backend_params

Parameter	Type	Description
id	String	Parameter ID
req_param_id	String	ID of the request parameter to which the backend parameter is mapped
name	String	Parameter name
location	String	Parameter location
origin	Integer	Parameter type
value	Integer	Parameter value
remark	String	Description of the parameter

Table 4-143 Parameter description of auth_opt

Parameter	Type	Description
app_code_auth_type	String	Indicates whether AppCode authentication is enabled.

Example response:

```
{
  "name": "test",
  "type": 1,
  "version": "V0.0.1",
  "req_protocol": "HTTPS",
  "req_method": "GET",
  "req_uri": "/test/{project_id}",
  "auth_type": "APP",
  "auth_opt": {
    "app_code_auth_type": "HEADER"
  },
  "tags": ["APIG-SN-test", "test"],
  "cors": false,
  "match_mode": "NORMAL",
  "backend_type": "HTTP",
  "group_id": "f71f69876f90456ca6fd18ed012fdc11",
  "result_normal_sample": "hello world!",
  "id": "81efcfd94b8747a0b21e8c04144a4e8c",
  "status": 1,
  "arrange_necessary": 2,
  "register_time": "2018-08-15T03:41:11.0239936Z",
  "update_time": "2018-08-15T03:41:11.0239936Z",
  "group_name": "group0002",
  "sl_domain": "a8be0e466f0e4d8bb18ebd15402cdd66.apigw.example.com",
  "sl_domains": ["a8be0e466f0e4d8bb18ebd15402cdd66.apigw.example.com",
    "a8be0e466f0e4d8bb18ebd15402cdd66.apigw.example.cn"],
  "version_id": "69b7492e2855487398d45733b9d6147a",
  "publish_time": "2018-08-24T03:10:14Z",
  "backend_api": {
    "url_domain": "xxxxxxxx",
    "req_protocol": "HTTP",
    "req_method": "GET",
  }
}
```

```

"req_uri": "/test",
"timeout": 1000,
"vpc_status": 2,
"id": "3442ffd031814e3a8f133a9f1ea08453",
"status": 1,
"register_time": "2018-08-15T03:41:11.1019236Z",
"update_time": "2018-08-15T03:41:11.1019236Z"
},
"req_params": [
  {
    "name": "project_id",
    "type": "STRING",
    "location": "PATH",
    "required": 1,
    "valid_enable": 2,
    "id": "593c5560e0924e00af08fb458f850ecb"
  },
  {
    "name": "city",
    "type": "STRING",
    "location": "QUERY",
    "required": 2,
    "valid_enable": 2,
    "id": "e0b91bc81ae54f8ea850848d782d6e1e"
  }
],
"backend_params": [
  {
    "name": "project_id",
    "location": "QUERY",
    "origin": "REQUEST",
    "value": "project_id",
    "id": "44e03de2351e43a8b18ba9ec1e71d2e9",
    "req_param_id": "593c5560e0924e00af08fb458f850ecb"
  },
  {
    "name": "city",
    "location": "QUERY",
    "origin": "REQUEST",
    "value": "city",
    "id": "b60fcb5b86f4f5c8705c445b9bd6325",
    "req_param_id": "e0b91bc81ae54f8ea850848d782d6e1e"
  }
]
}

```

Status Codes

Table 4-144 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.2.13 Querying the Runtime Definition of an API

Function

This API is used to query the runtime definition of an API in a specified environment. The runtime definition of an API in the RELEASE environment is queried if no environment is specified.

The definition of an API is classified into the following types:

- Temporary definition: definition of an API used after the API was last edited.
- Runtime definition: snapshot of the temporary definition of an API captured when the API is published in an environment.

The runtime definition of an API is accessed when the API is called in an environment.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-145 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/apis/runtime/{id}[?env_id]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- The query condition is **env_id**.

The following table lists the parameter in the URI.

Table 4-146 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	API ID

Request

Table 4-147 Parameter description

Parameter	Mandatory	Type	Description
env_id	No	String	ID of the environment in which the API is published

Response

Table 4-148 Parameter description

Parameter	Type	Description
id	String	API ID
name	String	API name
group_id	String	ID of the API group to which the API belongs
group_name	String	Name of the API group to which the API belongs
type	Integer	API type
version	String	API version
req_protocol	String	Request protocol
req_method	String	Request method
req_uri	String	Access address
auth_type	String	Security authentication mode
auth_opt	Object	Security authentication mode parameter
authorizer_id	String	ID of the frontend custom authorizer
match_mode	String	Matching mode
remark	String	Description of the API
backend_type	String	Backend type
run_env_name	String	Name of the environment in which the API has been published
run_env_id	String	ID of the environment in which the API has been published
publish_id	String	ID of the publication record

Parameter	Type	Description
tag	String	Service name tag, which is to be discarded
tags	[]String	API tags
cors	Bool	Indicates whether CORS is supported.
body_remark	String	Description of the API request body, which can be an example request body, media type, or parameter information
result_normal_sample	String	Example response for a successful request
result_failure_sample	String	Example response for a failed request
response_id	String	ID of the gateway response
sl_domain	String	Subdomain name of the API group
sl_domains	Array of strings	List of subdomain names bound to the API group
req_params	Dictionary	Request parameter list

Table 4-149 Parameter description of req_params

Parameter	Type	Description
id	String	Parameter ID
name	String	Parameter name
type	String	Parameter type
location	String	Parameter location
default_value	String	Default value
sample_value	String	Example value
required	Integer	Indicates whether the parameter is mandatory.
valid_enable	Integer	Indicates whether validity check is enabled.
remark	String	Description of the parameter
enumerations	String	Enumerated value
min_num	Integer	Minimum value, which is valid when the parameter type is NUMBER
max_num	Integer	Maximum value, which is valid when the parameter type is NUMBER

Parameter	Type	Description
min_size	Integer	Minimum length
max_size	Integer	Maximum length
regular	String	Regular expression validation rule
json_schema	String	JSON validation rule

Table 4-150 Parameter description of auth_opt

Parameter	Type	Description
app_code_auth_type	String	Indicates whether AppCode authentication is enabled.

Example response:

```
{
  "name": "market_api01",
  "type": 1,
  "version": "V0.0.1",
  "req_protocol": "HTTPS",
  "req_method": "GET",
  "req_uri": "/test01",
  "auth_type": "APP",
  "auth_opt": {
    "app_code_auth_type": "HEADER"
  },
  "tags": ["APIG-SN-test", "test"],
  "cors": true,
  "match_mode": "NORMAL",
  "backend_type": "MOCK",
  "remark": "market_api01",
  "group_id": "7f848adc971749cda9c6aff3877cfc3e",
  "body_remark": "market_api01",
  "result_normal_sample": "success",
  "result_failure_sample": "",
  "id": "0e51b689e0784bc884f43756bbf34fa5",
  "group_name": "market_group01",
  "run_env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
  "run_env_name": "RELEASE",
  "publish_id": "f07eb9f5e5ba4bbf8e89326f5cae99c7",
  "sl_domain": "61297835ff1e4905b6f635dbcdf1777e.apigw.example.com",
  "sl_domains": ["61297835ff1e4905b6f635dbcdf1777e.apigw.example.com",
    "61297835ff1e4905b6f635dbcdf1777e.apigw.example.cn"],
  "req_params": [
    {
      "name": "project_id",
      "type": "STRING",
      "location": "PATH",
      "default_value": "",
      "sample_value": "",
      "required": 1,
      "valid_enable": 2,
      "remark": "",
      "enumerations": "",
      "min_num": 0,
      "max_num": 0,
      "min_size": 0,

```

```

    "max_size": 0,
    "regular": "",
    "json_schema": "",
    "id": "2a61905ea2304186a9422faba2940735"
  }
]
}

```

Status Codes

Table 4-151 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

4.2.14 Debugging an API

Function

This API is used to debug the definition of an API in a specified environment. The API caller must have the permissions required for operating this API.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-152 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/apis/debug/{api_id}

The following table lists the parameter in the URI.

Table 4-153 Parameter description

Parameter	Mandatory	Type	Description
api_id	Yes	String	API ID

Request

Table 4-154 Parameter description

Parameter	Mandatory	Type	Description
scheme	Yes	String	Request protocol, which can be: <ul style="list-style-type: none"> • HTTP • HTTPS
method	Yes	String	Request method, which can be: <ul style="list-style-type: none"> • GET • POST • PUT • DELETE • HEAD • PATCH • OPTIONS
domain	No	String	Access domain name of the API. If no value is specified, one of the following default values will be used based on the setting of mode : <ul style="list-style-type: none"> • For DEVELOPER, the subdomain name of the API group will be used. • For MARKET, the domain name of the API group allocated by the marketplace will be used. • For CONSUMER, the subdomain name of the API group will be used.
path	Yes	String	Request path of the API, starting with a slash (/) and with up to 1024 characters NOTE The request path must meet path requirements so that it can be correctly decoded after percent-encoding.

Parameter	Mandatory	Type	Description
query	No	Dictionary	<p>Query parameters, with each value being a character string array. Each parameter name must meet the following requirements:</p> <ul style="list-style-type: none"> • Contains letters, digits, periods (.), hyphens (-), or underscores (_). • Starts with a letter, with a maximum length of 32 bytes. • Case-insensitive and not starts with X-Apig- or X-Sdk-. • Case-insensitive and cannot be X-Stage.
header	No	Dictionary	<p>Header parameters, with each value being a character string array. Each parameter name must meet the following requirements:</p> <ul style="list-style-type: none"> • Contains letters, digits, periods (.), and hyphens (-). • Starts with a letter, with a maximum length of 32 bytes. • Case-insensitive and not starts with X-Apig- or X-Sdk-. • Case-insensitive and cannot be X-Stage. • Case-insensitive and cannot be X-Auth-Token or Authorization when mode is set to MARKET or CONSUMER. <p>NOTE Each header name is normalized before use. For example, x-MY-hEaDer is normalized as X-My-Header.</p>
body	No	String	Message body, with a maximum length of 2,097,152 bytes.

Parameter	Mandatory	Type	Description
mode	Yes	String	<p>Debugging mode, which can be:</p> <ul style="list-style-type: none"> • DEVELOPER: debugs the definition of an API that has not been published. • CONSUMER: debugs the definition of an API that has been published in a specified environment. <p>NOTE In DEVELOPER mode, the API caller must be the API owner. In CONSUMER mode, the API caller must be the API owner or has authorized its access to apps in the specified environment.</p>
app_key	No	String	AppKey used in the debugging request
app_secret	No	String	AppSecret used in the debugging request
stage	No	String	Running environment specified in the debugging request. This parameter is valid only when mode is set to CONSUMER . If no value is specified, RELEASE is used.

Example request:

```
{
  "mode": "DEVELOPER",
  "scheme": "HTTPS",
  "method": "GET",
  "path": "/test",
  "query": {
    "city": [
      "shenzhen",
      "beijing"
    ]
  },
  "header": {
    "X-My-City": [
      "shenzhen",
      "beijing"
    ]
  }
}
```

Response

Table 4-155 Parameter description

Parameter	Type	Description
request	String	Body of the debugging request
response	String	Body of the debugging response, with a maximum length of 2,097,152 bytes. Any content beyond this threshold will be truncated. NOTE Any content beyond the length limit will be truncated, and text [TRUNCATED] will be added to the response body.
latency	String	Debugging duration in milliseconds
log	String	Debugging logs

Example response:

```
{
  "request": "GET /test?city=shenzhen&city=beijing HTTP/1.1\r\nHost:
edf94892b11d440795562cb81c5be059.apigw.example.com\r\nUser-Agent: APIGatewayDebugClient/1.0\r\nX-
Apig-Mode: debug\r\nX-My-City: shenzhen\r\nX-My-City: beijing\r\n\r\n",
  "response": "HTTP/1.1 200 OK\r\nContent-Length: 33\r\nConnection: keep-alive\r\nContent-Type:
application/json; charset=utf-8\r\nDate: Fri, 24 Aug 2018 10:36:47 GMT\r\nServer: api-gateway\r\nX-Apig-
Latency: 13\r\nX-Apig-Ratelimit-API: remain:92,limit:100,time:1 minute\r\nX-Apig-Ratelimit-API-Allenv:
remain:9,limit:10,time:1 second\r\nX-Apig-Upstream-Latency: 1\r\nX-Request-Id:
12f69943cc2fa4f8a3674ee947655339\r\n\r\n{\r\n  \"version\": \"4.0.12.201808190004\"
}",
  "latency": "12",
  "log": ""
}
```

Status Codes

Table 4-156 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Internal Server Error

4.3 App Management

4.3.1 Object Model

This section describes the app object model.

 **NOTE**

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of C is mandatory.

Table 4-157 App object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	App ID	R	-
name	String	App name	CRU	Yes
status	Integer	App status, which can be: <ul style="list-style-type: none"> • 1: enabled • 2: disabled • 3: deleted Default value: 1 This parameter is not used currently.	R	-
appkey	String	AppKey, which is globally unique	R	-
app_secret	String	AppSecret	RU	-
project_id	String	ID of the tenant to which the app belongs, that is, the user that creates the app	-	-
remark	String	Description of the app	CRU	No
register_time	Timestamp	Time when the app is registered	R	-
update_time	Timestamp	Time when the app was last updated	R	-

4.3.2 Creating an App

Function

This API is used to create an app. An app is an identity for accessing an API. An app can call the APIs to which it has been authorized.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-158 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/apps

Request

Table 4-159 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	App name An app name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
remark	No	String	Description of the app The description cannot exceed 255 characters.
app_key	No	String	AppKey An AppKey consists of 8–64 characters, starting with a letter or digit. Only letters, digits, underscores (_), and hyphens (-) are allowed. NOTE This parameter is available in some regions.
app_secret	No	String	AppSecret An AppSecret consists of 8–64 characters, starting with a letter or digit. Only letters, digits, and the following special characters are allowed: _-!@#\$\$% NOTE This parameter is available in some regions.

Example request:

```
{
  "name": "app_001",
  "remark": "first app",
  "app_key": "app_key_sample",
  "app_secret": "app_secret_sample"
}
```

Response

Table 4-160 Parameter description

Parameter	Type	Description
id	String	App ID
name	String	App name
status	Integer	App status
app_key	String	AppKey
app_secret	String	AppSecret
creator	String	App creator, which can be: <ul style="list-style-type: none">● USER: The app is created by the API user.● MARKET: The app is allocated by the marketplace.
register_time	Timestamp	Time when the app is registered
remark	String	Description of the app
update_time	Timestamp	Time when the app was last updated
app_type	String	App type. The default value is apig .

Example response:

```
{
  "id": "14b399ac-967f-4115-bb62-c0346b4537e9",
  "name": "app_001",
  "status": 1,
  "app_key": "d49b1cbf-cc81-4a5f-b2a0-61b568e376eb",
  "app_secret": "*****",
  "creator": "USER",
  "remark": "First app",
  "register_time": "2017-12-28T12:26:54.2345858Z",
  "update_time": "2017-12-28T12:26:54.2345858Z",
  "app_type": "apig"
}
```

Status Codes

Table 4-161 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

4.3.3 Modifying an App

Function

This API is used to modify the information about a specified app. The following parameters can be modified: **name** and **remark**. If the function of customizing keys and secrets is enabled, **app_key** and **app_secret** can also be modified. Other parameters cannot be modified.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-162 HTTP/HTTPS request method and URI

Request Method	URI
PUT	/v1.0/apigw/apps/{id}

The following table lists the parameter in the URI.

Table 4-163 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	App ID, which can be obtained by querying the app list

Request

Table 4-164 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	App name An app name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
remark	No	String	Description of the app The description cannot exceed 255 characters.
app_key	No	String	AppKey An AppKey consists of 8–64 characters, starting with a letter or digit. Only letters, digits, underscores (_), and hyphens (-) are allowed. NOTE This parameter is available in some regions.
app_secret	No	String	AppSecret An AppSecret consists of 8–64 characters, starting with a letter or digit. Only letters, digits, and the following special characters are allowed: _-!@#\$\$% NOTE This parameter is available in some regions.

Example request:

```
{
  "name": "app_001",
  "remark": "First app",
  "app_key": "app_key_sample",
  "app_secret": "app_secret_sample"
}
```

Response

Table 4-165 Parameter description

Parameter	Type	Description
id	String	App ID
name	String	App name
status	Integer	App status

Parameter	Type	Description
app_key	String	AppKey
app_secret	String	AppSecret
creator	String	App creator, which can be: <ul style="list-style-type: none"> ● USER: The app is created by the API user. ● MARKET: The app is allocated by the marketplace.
register_time	Timestamp	Time when the app is registered
remark	String	Description of the app
update_time	Timestamp	Time when the app was last updated
app_type	String	App type. The default value is apig .

Example response:

```
{
  "id": "14b399ac-967f-4115-bb62-c0346b4537e9",
  "name": "app_001",
  "status": 1,
  "app_key": "d49b1cbf-cc81-4a5f-b2a0-61b568e376eb",
  "app_secret": "*****",
  "creator": "USER",
  "remark": "First app",
  "register_time": "2017-12-28T12:26:54Z",
  "update_time": "2017-12-28T12:28:07.2966182Z",
  "app_type": "apig"
}
```

Status Codes

Table 4-166 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.3.4 Resetting an AppSecret

Function

This API is used to reset the secret of a specified app.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-167 HTTP/HTTPS request method and URI

Request Method	URI
PUT	/v1.0/apigw/apps/secret/{id}

The following table lists the parameter in the URI.

Table 4-168 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	App ID, which can be obtained by querying the app list

Request

Table 4-169 Parameter description

Parameter	Mandatory	Type	Description
app_secret	No	String	<p>AppSecret</p> <p>An AppSecret consists of 8–64 characters, starting with a letter or digit. Only letters, digits, and the following special characters are allowed: _!@#\$\$%</p> <p>NOTE This parameter is available in some regions.</p>

Example request:

```
{
  "app_secret": "app_secret_sample"
}
```

Response

Table 4-170 Parameter description

Parameter	Type	Description
id	String	App ID
name	String	App name
status	Integer	App status
app_key	String	AppKey
app_secret	String	AppSecret
creator	String	App creator, which can be: <ul style="list-style-type: none">● USER: The app is created by the API user.● MARKET: The app is allocated by the marketplace.
register_time	Timestamp	Time when the app is registered
remark	String	Description of the app
update_time	Timestamp	Time when the app was last updated

Example response:

```
{
  "id": "14b399ac-967f-4115-bb62-c0346b4537e9",
  "name": "app_001",
  "status": 1,
  "app_key": "d49b1cbf-cc81-4a5f-b2a0-61b568e376eb",
  "app_secret": "*****",
  "creator": "USER",
  "remark": "First app",
  "register_time": "2017-12-28T12:26:54Z",
  "update_time": "2017-12-28T12:29:35.571Z"
}
```

Status Codes

Table 4-171 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

Status Code	Description
500	Server Internal Error

4.3.5 Deleting an App

Function

This API is used to delete an app.

Deleted apps cannot call any APIs. Apps automatically created by the marketplace cannot be deleted.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-172 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/apps/{id}

The following table lists the parameter in the URI.

Table 4-173 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	App ID

Request

N/A

Response

N/A

Status Codes

Table 4-174 Status codes

Status Code	Description
204	No Content

Status Code	Description
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
409	Conflict
500	Server Internal Error

4.3.6 Verifying an App

Function

This API is used to check whether an app exists. This API can be used by people except the app owner to verify an app. Only the basic information, such as **ID**, **name**, and **remark**, of the app is displayed.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-175 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/apps/validation/{id}

The following table lists the parameter in the URI.

Table 4-176 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	App ID

Request

N/A

Response

Table 4-177 Parameter description

Parameter	Type	Description
id	String	App ID
name	String	App name
remark	String	Description of the app

Example response:

```
{
  "id": "14b399ac-967f-4115-bb62-c0346b4537e9",
  "name": "app_001",
  "remark": "First app"
}
```

Status Codes

Table 4-178 Status codes

Status Code	Description
200	OK
401	Unauthorized
404	Not Found
500	Server Internal Error

4.3.7 Querying App Details

Function

This API is used to query the details of a specified app.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-179 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/apps/{id}

The following table lists the parameter in the URI.

Table 4-180 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	App ID

Request

N/A

Response

Table 4-181 Parameter description

Parameter	Type	Description
id	String	App ID
name	String	App name
status	Integer	App status
app_key	String	AppKey
app_secret	String	AppSecret
creator	String	App creator, which can be: <ul style="list-style-type: none">• USER: The app is created by the API user.• MARKET: The app is allocated by the marketplace.
register_time	Timestamp	Time when the app is registered
remark	String	Description of the app
update_time	Timestamp	Time when the app was last updated
app_type	String	App type. The default value is apig .

Example response:

```
{
  "id": "14b399ac-967f-4115-bb62-c0346b4537e9",
  "name": "app_001",
  "status": 1,
  "app_key": "d49b1cbf-cc81-4a5f-b2a0-61b568e376eb",
  "app_secret": "*****",
  "creator": "USER",
  "remark": "First app",
  "register_time": "2017-12-28T12:26:54Z",
  "update_time": "2017-12-28T12:28:07.2966182Z",
  "app_type": "apig"
}
```

Status Codes

Table 4-182 Status codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.3.8 Querying an App List

Function

This API is used to query a list of apps that match specified conditions.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-183 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/apps[?page_size, page_no, id, name, app_key, creator]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **id**, **name**, **app_key**, **creator**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-184 Parameter description

Parameter	Mandatory	Type	Description
id	No	String	App ID
name	No	String	App name
status	No	Integer	App status

Parameter	Mandatory	Type	Description
app_key	No	String	AppKey
creator	No	String	App creator, which can be: <ul style="list-style-type: none"> • USER: The app is created by the API user. • MARKET: The app is allocated by the marketplace.
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .
precise_search	No	String	Parameter name (name) for exact matching

Request

N/A

Response

Table 4-185 Parameter description

Parameter	Type	Description
total	Integer	Number of apps that match the query conditions
size	Integer	Length of the returned app list
apps	Dictionary	App list

Table 4-186 Parameter description of apps

Parameter	Type	Description
id	String	App ID

Parameter	Type	Description
name	String	App name
status	Integer	App status
app_key	String	AppKey
app_secret	String	AppSecret
register_time	Timestamp	Time when the app is registered
remark	String	Description of the app
update_time	Timestamp	Time when the app was last updated
creator	String	App creator, which can be: <ul style="list-style-type: none">● USER: The app is created by the API user.● MARKET: The app is allocated by the marketplace.
app_type	String	App type. The default value is apig .
bind_num	Integer	Number of APIs to which the app has been bound

Example response:

```
{
  "total": 2,
  "size": 2,
  "apps": [{
    "id": "98efd77d-10b5-4eca-8170-ed30a4a286a4",
    "name": "app_002",
    "status": 1,
    "app_key": "f627fbaa-2c8b-4f58-a690-f478f54d3fe2",
    "app_secret": "*****",
    "remark": "Second app",
    "register_time": "2017-12-28T12:32:50Z",
    "update_time": "2017-12-28T12:32:50Z",
    "creator": "MARKET",
    "app_type": "apig",
    "bind_num": 2
  },
  {
    "id": "14b399ac-967f-4115-bb62-c0346b4537e9",
    "name": "app_001",
    "status": 1,
    "app_key": "d49b1cbf-cc81-4a5f-b2a0-61b568e376eb",
    "app_secret": "*****",
    "remark": "First app",
    "register_time": "2017-12-28T12:26:54Z",
    "update_time": "2017-12-28T12:29:35.571Z",
    "creator": "USER",
    "app_type": "apig",
    "bind_num": 2
  }
  ]
}
```

Status Codes

Table 4-187 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
500	Server Internal Error

4.4 App Authorization Management

4.4.1 Object Model

This section describes the object model for app authorization.

 **NOTE**

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of C is mandatory.

Table 4-188 Object model for app authorization

Parameter	Type	Description	Operation Type	Mandatory
id	String	Authorization ID	R	-
app_id	String	App ID	CR	Yes
front_api_id	String	API ID	CR	Yes
env_id	String	ID of the environment in which the API is published	CR	Yes
create_time	Timestamp	Authorization time	R	-
auth_role	String	Authorizer	R	-

4.4.2 Querying the List of APIs Not Bound to an App

Function

This API is used to query the list of self-developed APIs that have not been bound to an app in a specified environment.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-189 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/app-auths/unbinded-apis[?page_size, page_no, app_id, env_id, api_id, api_name, group_id]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **app_id**, **api_id**, **api_name**, **group_id**, **env_id**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-190 Parameter description

Parameter	Mandator y	Type	Description
app_id	Yes	String	App ID
env_id	Yes	String	Environment ID
group_id	No	String	API group ID
api_id	No	String	API ID
api_name	No	String	API name
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .

Request

N/A

Response

Table 4-191 Parameter description

Parameter	Type	Description
total	Integer	Number of APIs that match the query conditions
size	Integer	Length of the returned API list
apis	Dictionary	API list

Table 4-192 Parameter description of apis

Parameter	Type	Description
id	String	API ID
name	String	API name
group_id	String	ID of the API group to which the API belongs
group_name	String	Name of the API group to which the API belongs
remark	String	Description of the API
run_env_name	String	Name of the environment in which the API has been published
run_env_id	String	ID of the environment in which the API has been published
publish_id	String	ID of the publication record
auth_type	String	Security authentication mode
req_uri	String	Access address

Example response:

```
{
  "total": 1,
  "size": 1,
  "apis": [{
    "id": "5bbc47e2-95b0-4a56-904e-a3cdc422f8e9",
    "name": "API_group_list_query",
    "remark": "API group list query",
    "group_id": "73c58022-f20d-495a-a188-85d718647f09",
    "group_name": "api_group_001",
    "run_env_name": "RELEASE",
    "run_env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
    "publish_id": "65e6fe53-1ac3-4481-ba36-9f0bc6f22057",
    "auth_type": "APP",
    "req_uri": "/test"
  }
]
```

```
}  
}
```

Status Codes

Table 4-193 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.4.3 Authorizing Apps

Function

An app cannot access any APIs immediately after it is created. To access an API in an environment, first authorize the app to call the API.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-194 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/app-auths

Request

Table 4-195 Parameter description

Parameter	Mandatory	Type	Description
api_ids	Yes	Array of strings	List of API IDs
app_ids	Yes	Array of strings	List of app IDs

Parameter	Mandatory	Type	Description
env_id	Yes	String	ID of the environment in which the apps will be authorized

Example request:

```
{
  "api_ids": ["5bbc47e2-95b0-4a56-904e-a3cdc422f8e9",
    "6632a062-9dcf-4f18-9646-3cabb925a290"],
  "app_ids": ["14b399ac-967f-4115-bb62-c0346b4537e9"],
  "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID"
}
```

Response

Table 4-196 Parameter description

Parameter	Type	Description
--	Dictionary	Authorization list

Table 4-197 Parameter description of the authorization list

Parameter	Type	Description
id	String	Authorization ID
api_id	String	API ID
app_id	String	App ID
auth_time	Timestamp	Authorization time
auth_role	String	Authorizer, which can be: PROVIDER CONSUMER
auth_result	String	Authorization result, which can be: SUCCESS SKIPPED

Example response:

```
[{
  "id": "dffcaff92d144135a9f420fcd485bbf3",
  "api_id": "8aa097b00e9843efabc9c593d11b769d",
  "app_id": "f8c6ea15-0d1b-4c5b-bd4b-911610bd3b3e",
  "auth_time": "2018-03-30T09:37:43.490197204Z",
  "auth_role": "PROVIDER",
}
```

```
"auth_result": "SUCCESS"
}]
```

Status Codes

Table 4-198 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
409	Conflict
500	Server Internal Error

4.4.4 Querying the List of APIs Bound to an App

Function

This API is used to query the list of APIs that have been bound to a specified app.

 **NOTE**

Only APIs that an app has been authorized to access in an environment can be queried.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-199 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/app-auths/binded-apis[?page_size, page_no, app_id, api_id, api_name,group_id,group_name,env_id]

 **NOTE**

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **app_id**, **api_id**, **api_name**, **group_id**, **group_name**, **env_id**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-200 Parameter description

Parameter	Mandatory	Type	Description
app_id	Yes	String	App ID
api_id	No	String	API ID
api_name	No	String	API name
group_id	No	String	API group ID
group_name	No	String	API group name
env_id	No	String	ID of the environment in which the app has been authorized
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .

Request

N/A

Response

Table 4-201 Parameter description

Parameter	Type	Description
total	Integer	Number of APIs that match the query conditions
size	Integer	Length of the returned API list
auths	Dictionary	API list

Table 4-202 Parameter description of auths

Parameter	Type	Description
id	String	Authorization ID
api_id	String	API ID
api_name	String	API name

Parameter	Type	Description
group_name	String	API group to which the API belongs
api_remark	String	Description of the API
api_type	Integer	API type
envname	String	Name of the environment in which the app has been authorized to call the API
env_id	String	ID of the environment
auth_role	String	Authorizer
auth_time	String	Authorization time
appid	String	App ID
app_name	String	App name
app_creator	String	App creator, which can be: <ul style="list-style-type: none">● USER: tenant● MARKET: API marketplace
app_remark	String	App description
app_type	String	App type
publish_id	String	API publication ID

Example response:

```
{
  "total": 1,
  "size": 1,
  "auths": [{
    "id": "cfa688d8-094b-445a-b270-6aeb0b70a84a",
    "api_id": "6632a062-9dcf-4f18-9646-3cabb925a290",
    "api_name": "API_list_query",
    "group_name": "api_group_001",
    "api_type": 1,
    "api_remark": "API list query",
    "envname": "RELEASE",
    "auth_role": "PROVIDER",
    "auth_time": "2017-12-28T12:46:43Z",
    "appid": "14b399ac-967f-4115-bb62-c0346b4537e9",
    "app_name": "app_001",
    "app_creator": "USER",
    "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
    "app_remark": "App description",
    "app_type": "apig",
    "publish_id": "f500ba7e369b4b1ebae99aa9d114a17a"
  }]
}
```

Status Codes

Table 4-203 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.4.5 Querying the List of Apps Bound to an API

Function

This API is used to query the list of apps that have been bound to a specified API.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-204 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/app-auths/binded-apps[?page_size, page_no, api_id, app_name, app_id, env_id]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **api_id**, **app_name**, **app_id**, **env_id**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-205 Parameter description

Parameter	Mandator y	Type	Description
api_id	No	String	API ID

Parameter	Mandatory	Type	Description
app_name	No	string	App name
app_id	No	String	App ID
env_id	No	String	Environment ID
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .

Request

N/A

Response

Table 4-206 Parameter description

Parameter	Type	Description
total	Integer	Number of apps that match the query conditions
size	Integer	Length of the returned app list
auths	Dictionary	App list

Table 4-207 Parameter description of auths

Parameter	Type	Description
id	String	Authorization ID
api_id	String	API ID
api_name	String	API name
group_name	String	API group to which the API belongs
api_remark	String	Description of the API
api_type	Integer	API type
envname	String	Environment in which access to the API has been authorized to an app
auth_role	String	Authorizer

Parameter	Type	Description
auth_time	String	Authorization time
appid	String	App ID
app_name	String	App name
app_creator	String	App creator, which can be: <ul style="list-style-type: none"> ● USER: tenant ● MARKET: API marketplace
publish_id	String	ID of the publication record
env_id	String	Environment ID
app_remark	String	App description
app_type	String	App type

Example response:

```
{
  "total": 1,
  "size": 1,
  "auths": [{
    "id": "cfa688d8-094b-445a-b270-6aeb0b70a84a",
    "api_id": "6632a062-9dcf-4f18-9646-3cabb925a290",
    "api_name": "API_list_query",
    "group_name": "api_group_001",
    "api_type": 1,
    "api_remark": "API list query",
    "envname": "RELEASE",
    "auth_role": "PROVIDER",
    "auth_time": "2017-12-28T12:46:43Z",
    "appid": "14b399ac-967f-4115-bb62-c0346b4537e9",
    "app_name": "app_001",
    "app_creator": "USER",
    "publish_id": "fe9d8ea9f9424594abc3bbe8d861c0f0",
    "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
    "app_remark": "",
    "app_type": "apig"
  }]
}
```

Status Codes

Table 4-208 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden

Status Code	Description
404	Not Found
500	Server Internal Error

4.4.6 Canceling Authorization

Function

This API is used to cancel the authorization of an app for accessing an API. After this operation, the app can no longer call the API.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-209 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/app-auths/{id}

The following table lists the parameter in the URI.

Table 4-210 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Authorization ID

Request

N/A

Response

N/A

Status Codes

Table 4-211 Status codes

Status Code	Description
204	No Content

Status Code	Description
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.5 Environment Management

4.5.1 Object Model

This section describes the object model for environment management.

 **NOTE**

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of C is mandatory.

Table 4-212 Object model for environment management

Parameter	Type	Description	Operation Type	Mandatory
id	String	Environment ID	R	-
name	String	Environment name	CUR	Yes
alias	String	Environment alias	RU	-
project_id	String	ID of the tenant that creates the environment	-	-
create_time	String	Time when the environment is created	R	-
remark	String	Description of the environment	CUR	No

4.5.2 Creating an Environment

Function

API providers can publish an API in different environments, such as the development, test, and production environments. API information, such as the

version, request address, and even request message, varies depending on the environment in which an API is published. For example, v1.0 of an API is published in the production environment, v1.1 in the test environment, and v1.2 in the development environment.

API Gateway provides environment management, enabling you to access API Gateway in different scenarios at minimal costs.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-213 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/envs

Request

Table 4-214 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Environment name An environment name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
remark	No	String	Description of the environment The description cannot exceed 255 characters.

Example request:

```
{
  "name": "DEV",
  "remark": "Development environment"
}
```

Response

Table 4-215 Parameter description

Parameter	Type	Description
id	String	Environment ID
name	String	Environment name

Parameter	Type	Description
create_time	Timestamp	Time when the environment is created
remark	String	Description of the environment

Example response:

```
{
  "id": "cca3616a-f368-4b32-9064-b2a631cb3eeb",
  "name": "DEV",
  "remark": "Development environment",
  "create_time": "2017-12-28T12:50:47.0744311Z"
}
```

Status Codes

Table 4-216 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

4.5.3 Modifying an Environment

Function

This API is used to modify the information about a specified environment. Only the **name** and **remark** attributes of an environment can be modified.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-217 HTTP/HTTPS request method and URI

Request Method	URI
PUT	/v1.0/apigw/envs/{id}

The following table lists the parameter in the URI.

Table 4-218 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Environment ID, which can be obtained by querying the environment information

Request

Table 4-219 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Environment name An environment name consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
remark	No	String	Description of the environment The description cannot exceed 255 characters.

Example request:

```
{
  "name": "DEVELOP",
  "remark": "Development environment"
}
```

Response

Table 4-220 Parameter description

Parameter	Type	Description
id	String	Environment ID
name	String	Environment name
create_time	Timestamp	Time when the environment is created
remark	String	Description of the environment

Example response:

```
{
  "id": "cca3616a-f368-4b32-9064-b2a631cb3eeb",
  "name": "DEVELOP",

```

```

    "remark": "Development environment",
    "create_time": "2017-12-28T12:50:47Z"
}

```

Status Codes

Table 4-221 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.5.4 Deleting an Environment

Function

This API is used to delete a specified environment.

This operation will cause the APIs published in the environment to become inaccessible to relevant apps and users. Ensure that you have notified users of the deletion or confirm that you insist on removing APIs from the deleted environment.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-222 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/envs/{id}

The following table lists the parameter in the URI.

Table 4-223 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Environment ID

Request

N/A

Response

N/A

Status Codes

Table 4-224 Status codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.5.5 Querying an Environment List

Function

This API is used to query an environment list that matches specified conditions.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-225 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/envs[?page_no, page_size,name]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **name**, **page_size**, and **page_no**.

Table 4-226 Parameter description

Parameter	Mandatory	Type	Description
name	No	String	Environment name
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .
precise_search	No	String	Parameter name (name) for exact matching

Request

N/A

Response

Table 4-227 Parameter description

Parameter	Type	Description
total	Integer	Number of environments that match the query conditions
size	Integer	Length of the returned environment list
envs	Dictionary	Environment list

Table 4-228 Parameter description of envs

Parameter	Type	Description
id	String	Environment ID
name	String	Environment name
create_time	Timestamp	Time when the environment is created
remark	String	Description of the environment

Example response:

```
{
  "total": 2,
  "size": 2,
  "envs": [{
    "id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
    "name": "RELEASE",
    "remark": "Production environment",
    "create_time": "2017-12-29T03:39:03.165657Z"
  },
  {
    "id": "cca3616a-f368-4b32-9064-b2a631cb3eeb",
    "name": "DEVELOP",
    "remark": "Development environment",
    "create_time": "2017-12-28T12:50:47Z"
  }
  ]
}
```

Status Codes

Table 4-229 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
500	Server Internal Error

4.6 Environment Variable Management

4.6.1 Object Model

This section describes the environment variable object model.

 **NOTE**

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of C is mandatory.

Table 4-230 Environment variable object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	Environment variable ID	R	-
env_id	String	Environment ID	CR	Yes
group_id	String	API group ID	CR	Yes

Parameter	Type	Description	Operation Type	Mandatory
variable_name	String	Variable name	CR	Yes
variable_value	String	Variable value	CR	Yes

4.6.2 Creating an Environment Variable

Function

Publishing an API in different environments may involve various environment variables, such as API service deployment address and request version.

Define environment variables when creating an API. When the API is called, the environment variables will be replaced with the variable values to distinguish environments.

Environment variables are defined for an API group and apply to all APIs in the group.

NOTE

1. Environment variable names must be unique for an API group in the same environment.
2. Environment variable names are case-sensitive. For example, **ABC** and **abc** are two different variables.
3. APIs that use environment variables cannot be debugged.
4. You must enclose an environment variable in number signs (#) so that it can be replaced with the actual value of the environment in which the API is published. For example, if the URL of an API is <https://#address#:8080> and the value of variable **address** is **192.168.1.5** in the RELEASE environment, the real URL of the API is <https://192.168.1.5:8080> after publishing.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-231 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/env-variables

Request

Table 4-232 Parameter description

Parameter	Mandatory	Type	Description
env_id	Yes	String	Environment ID
group_id	Yes	String	API group ID
variable_name	Yes	String	Variable name A variable name consists of 3–32 characters, starting with a letter. Only letters, digits, hyphens (-), and underscores (_) are allowed. The variable name is equivalent to #Name# in an API definition. Characters between the number signs are case-sensitive. The variable name will be replaced with the variable value after API publishing.
variable_value	Yes	String	Variable value A variable value consists of 1–255 characters. Only letters, digits, and special characters (_-/:.) are allowed.

Example request:

```
{
  "env_id": "cca3616a-f368-4b32-9064-b2a631cb3eeb",
  "group_id": "73c58022-f20d-495a-a188-85d718647f09",
  "variable_name": "address",
  "variable_value": "192.168.1.5"
}
```

Response

Table 4-233 Parameter description

Parameter	Type	Description
id	String	Environment variable ID
env_id	String	Environment ID
group_id	String	API group ID
variable_name	String	Variable name
variable_value	String	Variable value

Example response:


```
{
  "id": "104185e5-3e8f-4c63-a7e5-ef4117bf870c",
  "env_id": "cca3616a-f368-4b32-9064-b2a631cb3eeb",
  "group_id": "73c58022-f20d-495a-a188-85d718647f09",
  "variable_name": "address",
  "variable_value": "192.168.1.5"
}
```

Status Codes

Table 4-234 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.6.3 Deleting an Environment Variable

Function

This API is used to delete a specified environment variable.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-235 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/env-variables/{id}

The following table lists the parameter in the URI.

Table 4-236 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Environment variable ID

Request

N/A

Response

N/A

Status Codes

Table 4-237 Status codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.6.4 Querying Environment Variable Details

Function

This API is used to query the details of an environment variable.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-238 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/env-variables/{id}

The following table lists the parameter in the URI.

Table 4-239 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Environment variable ID

Request

N/A

Response

Table 4-240 Parameter description

Parameter	Type	Description
id	String	Environment variable ID
env_id	String	Environment ID
group_id	String	API group ID
variable_name	String	Variable name
variable_value	String	Variable value

Example response:

```
{
  "id": "104185e5-3e8f-4c63-a7e5-ef4117bf870c",
  "env_id": "cca3616a-f368-4b32-9064-b2a631cb3eeb",
  "group_id": "73c58022-f20d-495a-a188-85d718647f09",
  "variable_name": "address",
  "variable_value": "192.168.1.5"
}
```

Status Codes

Table 4-241 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.6.5 Querying an Environment Variable List

Function

This API is used to query the list of all environment variables under an API group.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-242 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/env-variables[?page_size, page_no, env_id, group_id, variable_name]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **env_id**, **group_id**, **variable_name**, **page_size**, and **page_no**.

Table 4-243 Parameter description

Parameter	Mandatory	Type	Description
env_id	No	String	Environment ID
group_id	Yes	String	API group ID
variable_name	No	String	Variable name
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .
precise_search	No	String	Parameter name (variable_name) for exact matching

Request

N/A

Response

Table 4-244 Parameter description

Parameter	Type	Description
variables	Dictionary	Environment variable list
total	Integer	Number of environment variables that match the query conditions
size	Integer	Length of the returned environment variable list

Table 4-245 Parameter description of variables

Parameter	Type	Description
id	String	Environment variable ID
env_id	String	Environment ID
group_id	String	API group ID
variable_name	String	Variable name
variable_value	String	Variable value

Example response:

```
{
  "total": 2,
  "size": 2,
  "variables": [
    {
      "id": "09ab8135-7224-40b9-bf5d-107f2a09d409",
      "env_id": "cca3616a-f368-4b32-9064-b2a631cb3eeb",
      "group_id": "73c58022-f20d-495a-a188-85d718647f09",
      "variable_name": "port",
      "variable_value": "8080"
    },
    {
      "id": "104185e5-3e8f-4c63-a7e5-ef4117bf870c",
      "env_id": "cca3616a-f368-4b32-9064-b2a631cb3eeb",
      "group_id": "73c58022-f20d-495a-a188-85d718647f09",
      "variable_name": "address",
      "variable_value": "192.168.1.5"
    }
  ]
}
```

Status Codes

Table 4-246 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.7 Request Throttling Policy Management

4.7.1 Object Model

This section describes the request throttling policy object model.

 **NOTE**

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of C is mandatory.

Table 4-247 Request throttling policy object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	ID of a request throttling policy	R	-
name	String	Name of a request throttling policy	CRU	Yes
project_id	String	ID of the tenant that creates the request throttling policy	-	-
api_call_limits	Integer	Maximum number of times an API can be accessed within a specified period	CRU	Yes

Parameter	Type	Description	Operation Type	Mandatory
user_call_limits	Integer	Maximum number of times the API can be accessed by a user within the same period. The value of this parameter must be less than or equal to that of api_call_limits .	CRU	No
app_call_limits	Integer	Maximum number of times the API can be accessed by an app within the same period. The value of this parameter must be less than or equal to that of user_call_limits .	CRU	No
ip_call_limits	Integer	Maximum number of times the API can be accessed by an IP address within the same period. The value of this parameter must be less than or equal to that of api_call_limits .	CRU	No
time_interval	Integer	Period of time for limiting the number of API calls	CRU	Yes
time_unit	String	Time unit, which can be: <ul style="list-style-type: none"> • SECOND • MINUTE • HOUR • DAY 	CRU	Yes
create_time	Timestamp	Time when the request throttling policy is created	R	-
remark	String	Description of the request throttling policy	CRU	No
type	Integer	Type of the request throttling policy, which can be: <ul style="list-style-type: none"> • 1: exclusive • 2: shared 	CRU	No

4.7.2 Creating a Request Throttling Policy

Function

After an API goes online, the system attaches a request throttling policy to it by default. The API provider can change the request throttling policy based on the service capabilities and load of the API.

A request throttling policy restricts the maximum number of times an API can be called within a specified period.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-248 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/throttles

Request

Table 4-249 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the request throttling policy The name of a request throttling policy consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
api_call_limits	Yes	Integer	Maximum number of times an API can be accessed within a specified period. The value of this parameter cannot exceed the default limit 200 TPS. You can change the default limit to meet service requirements. The maximum value is 2,147,483,647. Enter a positive integer.
user_call_limits	No	Integer	Maximum number of times the API can be accessed by a user within the same period. The value of this parameter must be less than or equal to that of api_call_limits . The maximum value is 2,147,483,647. Enter a positive integer.

Parameter	Mandatory	Type	Description
app_call_limits	No	Integer	Maximum number of times the API can be accessed by an app within the same period. The value of this parameter must be less than or equal to that of user_call_limits . The maximum value is 2,147,483,647. Enter a positive integer.
ip_call_limits	No	Integer	Maximum number of times the API can be accessed by an IP address within the same period. The value of this parameter must be less than or equal to that of api_call_limits . The maximum value is 2,147,483,647. Enter a positive integer.
time_interval	Yes	Integer	Period of time for limiting the number of API calls. This parameter applies with each of the preceding three API call limits. The maximum value is 2,147,483,647. Enter a positive integer.
time_unit	Yes	String	Time unit, which can be: <ul style="list-style-type: none"> • SECOND • MINUTE • HOUR • DAY
remark	No	String	Description of the request throttling policy The description cannot exceed 255 characters.
type	No	Integer	Type of the request throttling policy, which can be: <ul style="list-style-type: none"> • 1: exclusive, limiting the maximum number of times a single API can be called within the specified period. • 2: shared, limiting the maximum number of times all APIs can be called within the specified period.
enable_adaptive_control	No	String	Enabling status of dynamic request throttling <ul style="list-style-type: none"> • TRUE • FALSE This function is currently not available.

Example request:

```
{
  "api_call_limits": 800,
```

```

"user_call_limits": 500,
"app_call_limits": 300,
"ip_call_limits": 600,
"name": "800_calls_per_second",
"remark": "Total: 800 calls/second; user: 500 calls/second; app: 300 calls/second; IP address: 600 calls/second",
"time_interval": 1,
"time_unit": "SECOND"
}

```

Response

Table 4-250 Parameter description

Parameter	Type	Description
id	String	ID of the request throttling policy
name	String	Name of the request throttling policy
api_call_limits	Integer	Maximum number of times an API can be accessed within a specified period
user_call_limits	Integer	Maximum number of times the API can be accessed by a user within the same period
app_call_limits	Integer	Maximum number of times the API can be accessed by an app within the same period
ip_call_limits	Integer	Maximum number of times the API can be accessed by an IP address within the same period
time_interval	Integer	Period of time for limiting the number of API calls
time_unit	String	Time unit for limiting the number of API calls
remark	String	Description of the request throttling policy
create_time	Timestamp	Time when the request throttling policy is created
is_include_special_throttle	Integer	Indicates whether an excluded request throttling configuration has been created. The value can be: <ul style="list-style-type: none"> 1: yes 2: no
type	Integer	Type of the request throttling policy, which can be: <ul style="list-style-type: none"> 1: exclusive 2: shared
bind_num	Integer	Number of APIs to which the request throttling policy has been bound

Parameter	Type	Description
enable_adaptive_control	String	Enabling status of dynamic request throttling <ul style="list-style-type: none">• TRUE• FALSE This function is currently not available.

Example response:

```
{
  "id": "0325b671-2d50-4614-9868-22102262695d",
  "name": "800_calls_per_second",
  "api_call_limits": 800,
  "user_call_limits": 500,
  "app_call_limits": 300,
  "ip_call_limits": 600,
  "time_interval": 1,
  "time_unit": "SECOND",
  "create_time": "2017-12-29T01:55:59.9904225Z",
  "remark": "Total: 800 calls/second; user: 500 calls/second; app: 300 calls/second; IP address: 600 calls/second",
  "is_inclu_special_throttle": 2,
  "type": 1,
  "bind_num": 0,
  "enable_adaptive_control": "FALSE"
}
```

Status Codes

Table 4-251 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
500	Server Internal Error

4.7.3 Modifying a Request Throttling Policy

Function

This API is used to modify the detailed information of a request throttling policy.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-252 HTTP/HTTPS request method and URI

Request Method	URI
PUT	/v1.0/apigw/throttles/{id}

The following table lists the parameter in the URI.

Table 4-253 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	ID of the request throttling policy that you want to modify

Request

Table 4-254 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the request throttling policy that you want to modify The name of a request throttling policy consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
api_call_limits	Yes	Integer	Maximum number of times an API can be accessed within a specified period. The value of this parameter cannot exceed the default limit 200 TPS. You can change the default limit to meet service requirements. The maximum value is 2,147,483,647. Enter a positive integer.
user_call_limits	No	Integer	Maximum number of times the API can be accessed by a user within the same period. The value of this parameter must be less than or equal to that of api_call_limits . The maximum value is 2,147,483,647. Enter a positive integer.
app_call_limits	No	Integer	Maximum number of times the API can be accessed by an app within the same period. The value of this parameter must be less than or equal to that of user_call_limits . The maximum value is 2,147,483,647. Enter a positive integer.

Parameter	Mandatory	Type	Description
ip_call_limits	No	Integer	Maximum number of times the API can be accessed by an IP address within the same period. The value of this parameter must be less than or equal to that of api_call_limits . The maximum value is 2,147,483,647. Enter a positive integer.
time_interval	Yes	Integer	Period of time for limiting the number of API calls. This parameter applies with each of the preceding three API call limits. The maximum value is 2,147,483,647. Enter a positive integer.
time_unit	Yes	String	Time unit, which can be: <ul style="list-style-type: none"> • SECOND • MINUTE • HOUR • DAY
remark	No	String	Description of the request throttling policy The description cannot exceed 255 characters.
type	No	Integer	Type of the request throttling policy, which can be: <ul style="list-style-type: none"> • 1: exclusive, limiting the maximum number of times a single API can be called within the specified period. • 2: shared, limiting the maximum number of times all APIs can be called within the specified period.
enable_adaptive_control	No	String	Enabling status of dynamic request throttling <ul style="list-style-type: none"> • TRUE • FALSE This function is currently not available.

Example request:

```
{
  "api_call_limits": 1000,
  "user_call_limits": 500,
  "app_call_limits": 300,
  "ip_call_limits": 600,
  "name": "1000_calls_per_second",
  "remark": "Total: 1000 calls/second; user: 500 calls/second; app: 300 calls/second; IP address: 600 calls/second",
  "time_interval": 1,
  "time_unit": "SECOND"
}
```

Response

Table 4-255 Parameter description

Parameter	Type	Description
id	String	ID of the request throttling policy
name	String	Name of the request throttling policy
api_call_limits	Integer	Maximum number of times an API can be accessed within a specified period
user_call_limits	Integer	Maximum number of times the API can be accessed by a user within the same period
app_call_limits	Integer	Maximum number of times the API can be accessed by an app within the same period
ip_call_limits	Integer	Maximum number of times the API can be accessed by an IP address within the same period
time_interval	Integer	Period of time for limiting the number of API calls
time_unit	String	Time unit for limiting the number of API calls
remark	String	Description of the request throttling policy
create_time	Timestamp	Time when the request throttling policy is created
is_include_special_throttle	Integer	Indicates whether an excluded request throttling configuration has been created. The value can be: <ul style="list-style-type: none"> • 1: yes • 2: no
type	Integer	Type of the request throttling policy, which can be: <ul style="list-style-type: none"> • 1: exclusive • 2: shared
bind_num	Integer	Number of APIs to which the request throttling policy has been bound
enable_adaptive_control	String	Enabling status of dynamic request throttling <ul style="list-style-type: none"> • TRUE • FALSE This function is currently not available.

Example response:

```
{
  "id": "0325b671-2d50-4614-9868-22102262695d",
  "name": "1000_calls_per_second",
  "api_call_limits": 1000,
  "user_call_limits": 500,
  "app_call_limits": 300,
  "ip_call_limits": 600,
  "time_interval": 1,
  "time_unit": "SECOND",
  "create_time": "2017-12-29T01:55:59Z",
  "remark": "Total: 1000 calls/second; user: 500 calls/second; app: 300 calls/second; IP address: 600 calls/second",
  "is_inclu_special_throttle": 2,
  "type": 1,
  "bind_num": 0,
  "enable_adaptive_control": "FALSE"
}
```

Status Codes

Table 4-256 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.7.4 Deleting a Request Throttling Policy

Function

This API is used to delete a request throttling policy and all binding relationships between the policy and APIs.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-257 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/throttles/{id}

The following table lists the parameter in the URI.

Table 4-258 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a request throttling policy

Request

N/A

Response

N/A

Status Codes

Table 4-259 Status codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.7.5 Querying Details of a Request Throttling Policy

Function

This API is used to query the details of a request throttling policy.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-260 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/throttles/{id}

The following table lists the parameter in the URI.

Table 4-261 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a request throttling policy

Request

N/A

Response

Table 4-262 Parameter description

Parameter	Type	Description
id	String	ID of the request throttling policy
name	String	Name of the request throttling policy
api_call_limits	Integer	Maximum number of times an API can be accessed within a specified period
user_call_limits	Integer	Maximum number of times the API can be accessed by a user within the same period
app_call_limits	Integer	Maximum number of times the API can be accessed by an app within the same period
ip_call_limits	Integer	Maximum number of times the API can be accessed by an IP address within the same period
time_interval	Integer	Period of time for limiting the number of API calls
time_unit	String	Time unit for limiting the number of API calls
remark	String	Description of the request throttling policy
create_time	Timestamp	Time when the request throttling policy is created
is_include_special_throttle	Integer	Indicates whether an excluded request throttling configuration has been created. The value can be: <ul style="list-style-type: none"> 1: yes 2: no

Parameter	Type	Description
type	Integer	Type of the request throttling policy, which can be: <ul style="list-style-type: none"> • 1: exclusive • 2: shared
bind_num	Integer	Number of APIs to which the request throttling policy has been bound
enable_adaptive_control	String	Enabling status of dynamic request throttling <ul style="list-style-type: none"> • TRUE • FALSE This function is currently not available.

Example response:

```
{
  "id": "0325b671-2d50-4614-9868-22102262695d",
  "name": "1000_calls_per_second",
  "api_call_limits": 1000,
  "user_call_limits": 500,
  "app_call_limits": 300,
  "ip_call_limits": 600,
  "time_interval": 1,
  "time_unit": "SECOND",
  "create_time": "2017-12-29T01:55:59Z",
  "remark": "Total: 1000 calls/second; user: 500 calls/second; app: 300 calls/second; IP address: 600 calls/second",
  "is_inclu_special_throttle": 2,
  "type": 1,
  "bind_num": 0,
  "enable_adaptive_control": "FALSE"
}
```

Status Codes

Table 4-263 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.7.6 Querying the Request Throttling Policy List

Function

This API is used to query all request throttling policies.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-264 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/throttles[?page_size, page_no, id, name]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **id**, **name**, **page_size**, and **page_no**.

Request

Table 4-265 Parameter description

Parameter	Mandatory	Type	Description
id	No	String	ID of a request throttling policy
name	No	String	Name of the request throttling policy
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .
precise_search	No	String	Parameter name (name) for exact matching

Response

Table 4-266 Parameter description

Parameter	Type	Description
total	Integer	Number of request throttling policies that match the query conditions
size	Integer	Length of the returned request throttling policy list
throttles	Dictionary	Request throttling policy list

Table 4-267 Parameter description of throttles

Parameter	Type	Description
id	String	ID of a request throttling policy
name	String	Name of the request throttling policy
api_call_limits	Integer	Maximum number of times an API can be accessed within a specified period
user_call_limits	Integer	Maximum number of times the API can be accessed by a user within the same period
app_call_limits	Integer	Maximum number of times the API can be accessed by an app within the same period
ip_call_limits	Integer	Maximum number of times the API can be accessed by an IP address within the same period
time_interval	Integer	Period of time for limiting the number of API calls
time_unit	String	Time unit for limiting the number of API calls
remark	String	Description of the request throttling policy
create_time	Timestamp	Time when the request throttling policy is created
is_include_special_throttle	Integer	Indicates whether an excluded request throttling configuration has been created. The value can be: <ul style="list-style-type: none"> • 1: yes • 2: no

Parameter	Type	Description
type	Integer	Type of the request throttling policy, which can be: <ul style="list-style-type: none"> ● 1: exclusive ● 2: shared
bind_num	Integer	Number of APIs to which the request throttling policy has been bound
enable_adaptive_control	String	Enabling status of dynamic request throttling <ul style="list-style-type: none"> ● TRUE ● FALSE This function is currently not available.

Example response:

```
{
  "total": 2,
  "size": 2,
  "throttles": [{
    "id": "a3106cfe-801f-4919-b0d7-d785dc5b47f9",
    "name": "500_calls_per_second",
    "api_call_limits": 500,
    "user_call_limits": 200,
    "app_call_limits": 100,
    "ip_call_limits": 100,
    "time_interval": 1,
    "time_unit": "SECOND",
    "create_time": "2017-12-29T02:04:08Z",
    "remark": "Total: 500 calls/second; user: 200 calls/second; app: 100 calls/second; IP address: 100 calls/second",
    "is_inclu_special_throttle": 2,
    "type": 1,
    "bind_num": 1,
    "enable_adaptive_control": "FALSE"
  },
  {
    "id": "0325b671-2d50-4614-9868-22102262695d",
    "name": "1000_calls_per_second",
    "api_call_limits": 1000,
    "user_call_limits": 500,
    "app_call_limits": 300,
    "ip_call_limits": 600,
    "time_interval": 1,
    "time_unit": "SECOND",
    "create_time": "2017-12-29T01:55:59Z",
    "remark": "Total: 1000 calls/second; user: 500 calls/second; app: 300 calls/second; IP address: 600 calls/second",
    "is_inclu_special_throttle": 2,
    "type": 1,
    "bind_num": 1,
    "enable_adaptive_control": "FALSE"
  }
  ]
}
```

Status Codes

Table 4-268 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
500	Server Internal Error

4.8 Binding Request Throttling Policies

4.8.1 Object Model

This section describes the object model for binding a request throttling policy to an API.

 **NOTE**

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of **C** is mandatory.

Table 4-269 Object model for binding a request throttling policy

Parameter	Type	Description	Operation Type	Mandatory
id	String	Binding ID	R	-
throttle_id	String	Request throttling policy ID	CR	Yes
front_api_id	String	API ID	CR	Yes
env_id	String	Environment ID	CR	Yes
create_time	Timestamp	Time when the request throttling policy is bound to the API	R	-

4.8.2 Querying the List of APIs Not Bound to a Request Throttling Policy

Function

This API is used to query the list of self-developed APIs that are not bound to a request throttling policy. Only published APIs will be displayed.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-270 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/throttle-bindings/unbound-apis[?page_size, page_no, throttle_id, group_id, env_id, api_id, api_name]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **group_id**, **env_id**, **throttle_id**, **api_id**, **api_name**, **page_size**, and **page_no**.

Request

Table 4-271 Parameter description

Parameter	Mandatory	Type	Description
throttle_id	Yes	String	ID of a request throttling policy
env_id	No	String	Environment ID
group_id	No	String	API group ID
api_id	No	String	API ID
api_name	No	String	API name
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .

Parameter	Mandatory	Type	Description
page_no	No	Integer	Page number. The default value is 1.

Response

Table 4-272 Parameter description

Parameter	Type	Description
total	Integer	Number of APIs that match the query conditions
size	Integer	Length of the returned API list
apis	Dictionary	API list

Table 4-273 Parameter description of apis

Parameter	Type	Description
id	String	API ID
name	String	API name
group_id	String	ID of the API group to which the API belongs
group_name	String	Name of the API group to which the API belongs
type	Integer	API type
remark	String	Description of the API
run_env_name	String	Name of the environment in which the API has been published
run_env_id	String	ID of the environment in which the API has been published
publish_id	String	ID of the publication record
throttle_apply_id	String	Binding ID
throttle_name	String	Name of the request throttling policy bound to the API
apply_time	Timestamp	Time when the request throttling policy is bound to the API
auth_type	String	Security authentication mode

Parameter	Type	Description
req_uri	String	Access address

Example response:

```
{
  "total": 2,
  "size": 2,
  "apis": [{
    "id": "5bbc47e2-95b0-4a56-904e-a3cdc422f8e9",
    "name": "API_group_list_query",
    "type": 1,
    "remark": "API group list query",
    "group_id": "73c58022-f20d-495a-a188-85d718647f09",
    "group_name": "api_group_001",
    "run_env_name": "RELEASE",
    "run_env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
    "publish_id": "65e6fe53-1ac3-4481-ba36-9f0bc6f22057",
    "auth_type": "APP",
    "req_uri": "/test"
  },
  {
    "id": "6632a062-9dcf-4f18-9646-3cabb925a290",
    "name": "API_list_query",
    "type": 1,
    "remark": "API list query",
    "group_id": "73c58022-f20d-495a-a188-85d718647f09",
    "group_name": "api_group_001",
    "run_env_name": "RELEASE",
    "run_env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
    "publish_id": "374a6d5a-20c7-4ea1-82e1-19fce4556956",
    "auth_type": "APP",
    "req_uri": "/test"
  }
  ]
}
```

Status Codes

Table 4-274 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.8.3 Binding a Request Throttling Policy

Function

The request throttling policy bound to an API will control all access to the API. If the number of API calls within a specified period reaches the limit, subsequent access will be rejected, protecting the backend API from abnormal traffic and ensuring stable service running.

This API is used to bind a request throttling policy to an API that has been published in an environment.

You can bind different request throttling policies to an API in different environments, but can bind only one request throttling policy to the API in each environment.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-275 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/throttle-bindings

Request

Table 4-276 Parameter description

Parameter	Mandatory	Type	Description
publish_ids	Yes	Array of strings	API publication record ID
strategy_id	Yes	String	ID of a request throttling policy

Example request:

```
{
  "publish_ids": [
    "374a6d5a-20c7-4ea1-82e1-19fce4556956",
    "65e6fe53-1ac3-4481-ba36-9f0bc6f22057"
  ],
  "strategy_id": "0325b671-2d50-4614-9868-22102262695d"
}
```

Response

Table 4-277 Parameter description

Parameter	Type	Description
throttle_appl s	Dictionary	Binding list

Table 4-278 Parameter description of throttle_applys

Parameter	Type	Description
id	String	Binding ID
strategy_id	String	ID of a request throttling policy
publish_id	String	API publication record ID
scope	Integer	Scope of the request throttling policy, which can be: <ul style="list-style-type: none">• 1: access from users and apps• 2: access from a user• 3: access from an app Currently, only 1 is supported.
apply_time	Timestamp	Time when the request throttling policy is bound to the API

Example response:

```
{
  "throttle_applys": [{
    "id": "507c6a9f-8322-4dc2-8ba5-b4d74e3690d3",
    "strategy_id": "0325b671-2d50-4614-9868-22102262695d",
    "publish_id": "374a6d5a-20c7-4ea1-82e1-19fce4556956",
    "scope": 1,
    "apply_time": "2017-12-29T03:01:11.138456Z"
  },
  {
    "id": "90f05978-06a3-4096-8bea-b5e2fa12b843",
    "strategy_id": "0325b671-2d50-4614-9868-22102262695d",
    "publish_id": "65e6fe53-1ac3-4481-ba36-9f0bc6f22057",
    "scope": 1,
    "apply_time": "2017-12-29T03:01:11.138456Z"
  }
]
```

Status Codes

Table 4-279 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.8.4 Querying the List of APIs Bound to a Request Throttling Policy

Function

This API is used to query the list of APIs to which a specified request throttling policy has been bound.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-280 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/throttle-bindings/binded-apis[?page_size, page_no, throttle_id, env_id, group_id, api_id, api_name]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **group_id**, **env_id**, **throttle_id**, **api_id**, **api_name**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-281 Parameter description

Parameter	Mandatory	Type	Description
throttle_id	Yes	String	ID of a request throttling policy
env_id	No	String	Environment ID
group_id	No	String	API group ID
api_id	No	String	API ID
api_name	No	String	API name
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .

Request

N/A

Response

Table 4-282 Parameter description

Parameter	Type	Description
total	Integer	Number of APIs that match the query conditions
size	Integer	Length of the returned API list
apis	Dictionary	API list

Table 4-283 Parameter description of apis

Parameter	Type	Description
id	String	API ID
name	String	API name
group_id	String	ID of the API group to which the API belongs
group_name	String	Name of the API group to which the API belongs
type	Integer	API type

Parameter	Type	Description
remark	String	Description of the API
run_env_name	String	Name of the environment in which the API has been published
run_env_id	String	ID of the environment in which the API has been published
publish_id	String	ID of the publication record
throttle_apply_id	String	Binding ID
throttle_name	String	Name of the request throttling policy bound to the API
apply_time	Timestamp	Time when the request throttling policy is bound to the API
auth_type	String	Security authentication mode
req_uri	String	Access address

Example response:

```
{
  "total": 2,
  "size": 2,
  "apis": [
    {
      "id": "5bbc47e2-95b0-4a56-904e-a3cdc422f8e9",
      "name": "API_group_list_query",
      "type": 1,
      "remark": "API group list query",
      "group_id": "73c58022-f20d-495a-a188-85d718647f09",
      "group_name": "api_group_001",
      "run_env_name": "RELEASE",
      "run_env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
      "publish_id": "65e6fe53-1ac3-4481-ba36-9f0bc6f22057",
      "throttle_apply_id": "90f05978-06a3-4096-8bea-b5e2fa12b843",
      "throttle_name": "throttle1",
      "apply_time": "2017-12-29T03:01:11.138456Z",
      "auth_type": "APP",
      "req_uri": "/test"
    },
    {
      "id": "6632a062-9dcf-4f18-9646-3cabb925a290",
      "name": "API_list_query",
      "type": 1,
      "remark": "API list query",
      "group_id": "73c58022-f20d-495a-a188-85d718647f09",
      "group_name": "api_group_001",
      "run_env_name": "RELEASE",
      "run_env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
      "publish_id": "374a6d5a-20c7-4ea1-82e1-19fce4556956",
      "throttle_apply_id": "507c6a9f-8322-4dc2-8ba5-b4d74e3690d3",
      "throttle_name": "throttle1",
      "apply_time": "2017-12-29T03:01:11.138456Z",
      "auth_type": "APP",
      "req_uri": "/test"
    }
  ]
}
```

Status Codes

Table 4-284 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.8.5 Querying the List of Request Throttling Policies Bound to an API

Function

This API is used to query the list of request throttling policies that have been bound to an API. Only one request throttling policy can be bound to an API in an environment.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-285 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/throttle-bindings/binded-throttles[?page_no, page_size, api_id, throttle_id, throttle_name,env_id]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **api_id**, **throttle_id**, **throttle_name**, **env_id**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-286 Parameter description

Parameter	Mandatory	Type	Description
api_id	Yes	String	API ID
throttle_id	No	String	Request throttling policy ID
throttle_name	No	String	Request throttling policy name
env_id	No	String	Environment ID
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .

Request

N/A

Response

Table 4-287 Parameter description

Parameter	Type	Description
total	Integer	Number of request throttling policies that match the query conditions
size	Integer	Length of the returned request throttling policy list
throttles	Dictionary	Request throttling policy list

Table 4-288 Parameter description of throttles

Parameter	Type	Description
id	String	Request throttling policy ID
name	String	Request throttling policy name
api_call_limits	Integer	Maximum number of times an API can be accessed within a specified period

Parameter	Type	Description
user_call_limits	Integer	Maximum number of times the API can be accessed by a user within the same period
app_call_limits	Integer	Maximum number of times the API can be accessed by an app within the same period
ip_call_limits	Integer	Maximum number of times the API can be accessed by an IP address within the same period
time_interval	Integer	Period of time for limiting the number of API calls
time_unit	String	Time unit for limiting the number of API calls
remark	String	Description of the request throttling policy
create_time	Timestamp	Time when the request throttling policy is created
is_include_special_throttle	Integer	Indicates whether an excluded request throttling configuration has been created. The value can be: 1 : yes 2 : no
env_name	String	Environment in which the request throttling policy takes effect
type	Integer	Type of the request throttling policy
bind_id	String	Binding ID
bind_time	Timestamp	Time when the request throttling policy is bound to the API
bind_num	Integer	Number of APIs to which the request throttling policy has been bound
enable_adaptive_control	String	Enabling status of dynamic request throttling. This function is currently not available.

Example response:

```
{
  "total": 1,
  "size": 1,
  "throttles": [{
    "id": "0325b671-2d50-4614-9868-22102262695d",
    "name": "1000_calls_per_second",
    "api_call_limits": 1000,
    "user_call_limits": 500,
    "app_call_limits": 300,
    "ip_call_limits": 100,
    "time_interval": 1,
    "time_unit": "SECOND",
    "create_time": "2017-12-29T01:55:59Z",
```

```

    "remark": "Total: 1000 calls/second; user: 500 calls/second; app: 300 calls/second",
    "is_inclu_special_throttle": 2,
    "env_name": "RELEASE",
    "type": 1,
    "bind_id": "359f5c1868f647b6ad0f0d285154a791",
    "bind_time": "2019-07-08T01:27:38Z",
    "bind_num": 1,
    "enable_adaptive_control": "FALSE"
  }}
}

```

Status Codes

Table 4-289 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.8.6 Unbinding a Request Throttling Policy

Function

This API is used to unbind a request throttling policy from an API.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-290 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/throttle-bindings/{id}

The following table lists the parameters in the URI.

Table 4-291 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Binding ID

Request

N/A

Response

N/A

Status Codes

Table 4-292 Status codes

Status Code	Description
204	No Content
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.9 Excluded Request Throttling Configuration

4.9.1 Object Model

This section describes the object model for excluded request throttling configurations.

 **NOTE**

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of C is mandatory.

Table 4-293 Object model for excluded request throttling configurations

Parameter	Type	Description	Operation Type	Mandatory
id	String	Excluded request throttling configuration ID	R	-
strategy_id	String	Request throttling policy ID	CR	Yes

Parameter	Type	Description	Operation Type	Mandatory
instance_id	String	ID of the object to which the excluded request throttling configuration applies	CR	Yes
instance_type	String	Object type, which can be APP or USER .	CR	Yes
call_limits	Integer	Maximum number of times the excluded object can access an API within the throttling period	CRU	Yes
apply_time	Timestamp	Time when the excluded request throttling configuration is created	R	-

4.9.2 Creating an Excluded Request Throttling Configuration

Function

A request throttling policy controls the maximum number of times an API can be accessed within a specified period and the maximum numbers of times the API can be accessed by a tenant or an app within the same period.

When necessary, you can create an excluded request throttling configuration to specify the threshold of API calls for a specific app. For example, after you set the API call threshold for all apps to 500 calls/minute, you can specify the API call threshold of app 1 as 800 calls/minute.

You can add excluded apps or tenants to a request throttling policy.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-294 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/throttle-specials

Request

Table 4-295 Parameter description

Parameter	Mandatory	Type	Description
call_limits	Yes	Integer	Maximum number of times the excluded object can access an API within the throttling period
instance_id	Yes	String	Excluded app ID or excluded account ID
instance_type	Yes	String	Object type, which can be APP or USER
strategy_id	Yes	String	Request throttling policy ID

Example request:

```
{
  "call_limits": 150,
  "instance_id": "98efd77d-10b5-4eca-8170-ed30a4a286a4",
  "instance_type": "APP",
  "strategy_id": "a3106cfe-801f-4919-b0d7-d785dc5b47f9"
}
```

Response

Table 4-296 Parameter description

Parameter	Type	Description
id	String	Excluded request throttling configuration ID
strategy_id	String	Request throttling policy ID
instance_id	Integer	Excluded object ID
instance_name	String	Name of an app or a tenant to which the excluded request throttling configuration applies
instance_type	Integer	Type of the excluded object
call_limits	Integer	Maximum number of times the excluded object can access an API within the throttling period
apply_time	Timestamp	Time when the excluded request throttling configuration is created
app_id	String	ID of the app to which the excluded request throttling configuration applies

Parameter	Type	Description
app_name	String	Name of the app to which the excluded request throttling configuration applies

Example response:

```
{
  "id": "778879b8-df10-495b-a087-874859fdea6d",
  "strategy_id": "a3106cfe-801f-4919-b0d7-d785dc5b47f9",
  "instance_id": "98efd77d-10b5-4eca-8170-ed30a4a286a4",
  "instance_name": "app_002",
  "instance_type": "APP",
  "call_limits": 150,
  "apply_time": "2017-12-29T03: 11: 18.2698381Z",
  "app_id": "98efd77d-10b5-4eca-8170-ed30a4a286a4",
  "app_name": "app_002"
}
```

Status Codes

Table 4-297 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.9.3 Modifying an Excluded Request Throttling Configuration

Function

This API is used to modify an excluded configuration of a request throttling policy.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-298 HTTP/HTTPS request method and URI

Request Method	URI
PUT	/v1.0/apigw/throttle-specials/{id}

The following table lists the parameter in the URI.

Table 4-299 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Excluded request throttling configuration ID

Request

Table 4-300 Parameter description

Parameter	Mandatory	Type	Description
call_limits	Yes	Integer	Maximum number of times the excluded object can access an API within the throttling period

Example request:

```
{
  "call_limits": 180
}
```

Response

Table 4-301 Parameter description

Parameter	Type	Description
id	String	Excluded request throttling configuration ID
strategy_id	String	ID of the request throttling policy to which the excluded configuration belongs
instance_id	Integer	ID of an object specified in the excluded request throttling configuration
instance_name	String	Name of an app or a tenant to which the excluded request throttling configuration applies
instance_type	Integer	Type of the excluded object
call_limits	Integer	Maximum number of times the excluded object can access an API within the throttling period

Parameter	Type	Description
apply_time	Timestamp	Time when the excluded request throttling configuration is created
app_id	String	ID of the app to which the excluded request throttling configuration applies
app_name	String	Name of the app to which the excluded request throttling configuration applies

Example response:

```
{
  "id": "778879b8-df10-495b-a087-874859fdea6d",
  "strategy_id": "a3106cfe-801f-4919-b0d7-d785dc5b47f9",
  "instance_id": "98efd77d-10b5-4eca-8170-ed30a4a286a4",
  "instance_name": "app_002",
  "instance_type": "APP",
  "call_limits": 180,
  "apply_time": "2017-12-29T03:11:18Z",
  "app_id": "98efd77d-10b5-4eca-8170-ed30a4a286a4",
  "app_name": "app_002"
}
```

Status Codes

Table 4-302 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.9.4 Deleting an Excluded Request Throttling Configuration

Function

This API is used to delete an excluded configuration of a request throttling policy.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-303 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/throttle-specials/{id}

The following table lists the parameter in the URI.

Table 4-304 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Excluded request throttling configuration ID

Request

N/A

Response

N/A

Status Codes

Table 4-305 Status codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.9.5 Querying the List of Excluded Request Throttling Configurations

Function

This API is used to query all excluded configurations of a request throttling policy.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-306 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/throttle-specials/{strategy_id}[?page_size, page_no, instance_type, app_name, user]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **strategy_id**, **app_name**, **user**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-307 Parameter description

Parameter	Mandatory	Type	Description
strategy_id	Yes	String	Request throttling policy ID
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .
instance_type	No	String	Object type, which can be APP or USER
app_name	No	String	Name of an excluded app
user	No	String	Account ID

Request

N/A

Response

Table 4-308 Parameter description

Parameter	Type	Description
throttle_specials	Dictionary	Excluded request throttling configuration list
total	Integer	Number of excluded request throttling configurations that match the query conditions
size	Integer	Length of the returned excluded request throttling configuration list

Table 4-309 Parameter description of throttle_specials

Parameter	Type	Description
id	String	Excluded request throttling configuration ID
strategy_id	String	ID of the request throttling policy to which the excluded request throttling configuration belongs
instance_id	Integer	ID of an object specified in the excluded request throttling configuration
instance_name	String	Name of an app or a tenant to which the excluded request throttling configuration applies
instance_type	Integer	Type of the excluded object
call_limits	Integer	Maximum number of times the excluded object can access an API within the throttling period
apply_time	Timestamp	Time when the excluded request throttling configuration is created
app_id	String	ID of the app to which the excluded request throttling configuration applies
app_name	String	Name of the app to which the excluded request throttling configuration applies

Example response:

```
{
  "total": 1,
  "size": 1,
  "throttle_specials": [{
    "id": "778879b8-df10-495b-a087-874859fdea6d",
    "strategy_id": "a3106cfe-801f-4919-b0d7-d785dc5b47f9",
```

```
    "instance_id": "98efd77d-10b5-4eca-8170-ed30a4a286a4",  
    "instance_name": "app_002",  
    "instance_type": "APP",  
    "call_limits": 180,  
    "apply_time": "2017-12-29T03:11:18Z",  
    "app_id": "98efd77d-10b5-4eca-8170-ed30a4a286a4",  
    "app_name": "app_002"  
  }  
}
```

Status Codes

Table 4-310 Status codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.10 Access Control Policy Management

4.10.1 Object Model

To improve access security of a published API, you can control the access from certain IP addresses by configuring a blacklist or whitelist. This section describes the object model for blacklist/whitelist (access control policy) management, as shown in [Object Model](#).

NOTE

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of C is mandatory.

Table 4-311 Object model for access control policies

Parameter	Type	Description	Operation Type	Mandatory
id	String	Blacklist or whitelist ID	R	-
acl_name	String	Blacklist or whitelist name	CRU	Yes

Parameter	Type	Description	Operation Type	Mandatory
entity_type	String	Object type, which can be: <ul style="list-style-type: none"> • IP • DOMAIN: tenant name 	CRU	Yes
acl_type	String	Access control type, which can be: <ul style="list-style-type: none"> • PERMIT (whitelist) • DENY (blacklist) 	CRU	Yes
acl_value	String	IP address or tenant name	CRU	Yes
project_id	String	ID of the tenant that creates the access control policy	-	-
update_time	Timestamp	Time when the access control policy was last updated		

4.10.2 Creating an Access Control Policy

Function

This API is used to create an access control policy to allow or deny API access from certain IP addresses or domains. The **acl_value** value of a domain is a tenant name rather than a domain name (such as **www.exampleDomain.com**).

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-312 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/acls

Request

Table 4-313 Parameter description

Parameter	Type	Description
acl_name	String	Name of the access control policy The name of an access control policy consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
acl_type	String	Access control type, which can be: <ul style="list-style-type: none"> ● PERMIT (whitelist) ● DENY (blacklist)
acl_value	String	One or more objects from which the access will be controlled. Separate multiple objects with commas.
entity_type	String	Object type, which can be: <ul style="list-style-type: none"> ● IP ● DOMAIN

Example request:

```
{
  "acl_name": "test001",
  "acl_type": "PERMIT",
  "acl_value": "192.168.1.5,192.168.10.0/24,192.168.12.12-192.168.12.19",
  "entity_type": "IP"
}
```

Response

Table 4-314 Parameter description

Parameter	Type	Description
id	String	Access control policy ID
acl_name	String	Access control policy name
acl_type	String	Access control type, which can be: <ul style="list-style-type: none"> ● PERMIT (whitelist) ● DENY (blacklist)
acl_value	String	Access control objects
entity_type	String	Object type, which can be: <ul style="list-style-type: none"> ● IP ● DOMAIN

Parameter	Type	Description
update_time	Timestamp	Time when the access control policy was last updated

Example response:

```
{
  "id": "d402b35e-1054-4280-b1c5-0d741a28c995",
  "acl_name": "test",
  "entity_type": "IP",
  "acl_type": "PERMIT",
  "acl_value": "192.168.1.5,192.168.10.0/24,192.168.12.12-192.168.12.19",
  "update_time": "2017-11-18T14:27:36.918578+08:00"
}
```

Status Codes

Table 4-315 Status codes

Status Code	Description
201	Created
400	Bad Request
500	Server Internal Error

4.10.3 Modifying an Access Control Policy

Function

This API is used to modify a specified access control policy. Only attributes **acl_name**, **acl_type**, and **acl_value** can be modified.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-316 HTTP/HTTPS request method and URI

Request Method	URI
PUT	/v1.0/apigw/acls/{id}

The following table lists the parameter in the URI.

Table 4-317 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	ID of the access control policy that you want to modify. Obtain the ID by querying the access control policy.

Request

Table 4-318 Parameter description

Parameter	Type	Description
acl_name	String	Name of the access control policy The name of an access control policy consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
acl_type	String	Access control type, which can be: <ul style="list-style-type: none"> ● PERMIT (whitelist) ● DENY (blacklist)
acl_value	String	One or more objects from which the access will be controlled. Separate multiple objects with commas.

Example request:

```
{
  "acl_name": "string",
  "acl_type": "PERMIT",
  "acl_value": "19asdfaf-adfaf"
}
```

Response

Table 4-319 Parameter description

Name	Type	Description
id	String	Access control policy ID
acl_name	String	Access control policy name
acl_type	String	Access control type, which can be: <ul style="list-style-type: none"> ● PERMIT (whitelist) ● DENY (blacklist)

Name	Type	Description
acl_value	String	Access control objects
update_time	Timestamp	Time when the access control policy was last updated

Example response:

```
{
  "id": "d402b35e-1054-4280-b1c5-0d741a28c995",
  "acl_name": "goodone",

  "acl_type": "PERMIT",
  "acl_value": "19asdfaf-adfadf",
  "update_time": "2017-11-18T14:27:36.918578+08:00"
}
```

Status Codes

Table 4-320 Status codes

Status Code	Description
200	OK
400	Bad Request
403	Forbidden
404	Not Found

4.10.4 Deleting an Access Control Policy

Function

This API is used to delete a specified access control policy. Access control policies bound to APIs cannot be deleted.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-321 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/acls/{id}

The following table lists the parameter in the URI.

Table 4-322 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Access control policy ID

Request

N/A

Response

N/A

Status Codes

Table 4-323 Status codes

Status Code	Description
204	No Content
403	Forbidden
404	Not Found
500	Server Internal Error

4.10.5 Deleting Multiple Access Control Policies

Function

This API is used to delete multiple access control policies.

Access control policies bound to APIs cannot be deleted.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-324 HTTP/HTTPS request method and URI

Request Method	URI
PUT	/v1.0/apigw/acls[?action]

The following table lists the parameter in the URI.

Table 4-325 Parameter description

Parameter	Mandatory	Type	Description
action	Yes	String	The value must be delete .

Request

Table 4-326 Parameter description

Parameter	Mandatory	Type	Description
acls	No	String Array	IDs of the access control policies to be deleted

Example request:

```
{
  "acls": ["81efcfd94b8747a0b21e8c04144a4e8c","7addcd00cfab433984b1d8bf2fe08aaa"]
}
```

Response

Table 4-327 Parameter description

Parameter	Type	Description
success_count	Number	Number of successfully deleted access control policies
failure	Array	Error message and access control policies that fail to be deleted

Table 4-328 Parameter description of failure

Parameter	Type	Description
acl_id	String	ID of an access control policy that fails to be deleted
acl_name	String	Name of the access control policy
error_code	String	Error code
error_msg	String	Error message

Example response:

```
{
  "failure": [{
    "ac_id": "81efcd94b8747a0b21e8c04144a4e8c",
    "acl_name": "acl1",
    "error_code": "APIG.3447",
    "error_msg": "The Acl Strategy has already binded to APIs"
  }],
  "success_count": 3
}
```

Status Codes

Table 4-329 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.10.6 Querying Details of an Access Control Policy

Function

This API is used to query the details of a specified access control policy.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-330 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/acls/{id}

The following table lists the parameter in the URI.

Table 4-331 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Access control policy ID

Request

N/A

Response

Table 4-332 Parameter description

Parameter	Type	Description
id	String	Access control policy ID
acl_name	String	Access control policy name
acl_type	String	Access control type, which can be: <ul style="list-style-type: none"> ● PERMIT (whitelist) ● DENY (blacklist)
acl_value	String	Access control objects
entity_type	String	Object type, which can be: <ul style="list-style-type: none"> ● IP ● DOMAIN
update_time	Timestamp	Time when the access control policy was last updated

Example response:

```
{
  "id": "d402b35e-1054-4280-b1c5-0d741a28c995",
  "acl_name": "goodone",
  "entity_type": "DOMAIN",
  "acl_type": "PERMIT",
  "acl_value": "19asdfaf-adfadf",
  "update_time": "2017-11-18T14:27:36.918578+08:00"
}
```

Status Codes

Table 4-333 Status codes

Status Code	Description
200	OK
400	Bad Request
403	Forbidden
404	Not Found

4.10.7 Querying the Access Control Policy List

Function

This API is used to query the list of all access control policies.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-334 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/acls[?page_size, page_no, id, name, acl_type, entity_type]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **id**, **name**, **acl_type**, **entity_type**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-335 Parameter description

Parameter	Mandator y	Type	Description
id	No	String	Access control policy ID
name	No	String	Access control policy name
acl_type	No	String	Access control type, which can be PERMIT or DENY

Parameter	Mandatory	Type	Description
entity_type	No	String	Object type, which can be IP or DOMAIN
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .
precise_search	No	String	Parameter name (name) for exact matching

Request

N/A

Response

Table 4-336 Parameter description

Parameter	Type	Description
size	Integer	Number of access control policies displayed on the current page
total	Integer	Total number of access control policies
acls	Dictionary	Access control policy list

Table 4-337 Parameter description of acls

Parameter	Type	Description
id	String	Access control policy ID
acl_name	String	Access control policy name
acl_type	String	Access control type, which can be: <ul style="list-style-type: none"> ● PERMIT (whitelist) ● DENY (blacklist)
acl_value	String	Access control objects
entity_type	String	Object type, which can be: <ul style="list-style-type: none"> ● IP ● DOMAIN

Parameter	Type	Description
update_time	Timestamp	Time when the access control policy was last updated
bind_num	Integer	Number of APIs to which the access control policy has been bound

Example response:

```
{
  "total": 1,
  "size": 1,
  "acls": [{
    "id": "d402b35e-1054-4280-b1c5-0d741a28c995",
    "acl_name": "goodone",
    "entity_type": "DOMAIN",
    "acl_type": "PERMIT",
    "acl_value": "19asdfaf-adfadf",
    "update_time": "2017-11-18T14:27:36.918578+08:00",
    "bind_num": 1
  }]
}
```

Status Codes

Table 4-338 Status codes

Status Code	Description
200	OK
400	Bad Request
500	Server Internal Error

4.11 Binding Access Control Policies

4.11.1 Object Model

An access control policy can protect access security of an API only after being bound to the API. This section describes the object model for binding an access control policy to an API, as shown in [Table 4-339](#).

NOTE

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of C is mandatory.

Table 4-339 Object model for binding an access control policy

Parameter	Type	Description	Operation Type	Mandatory
id	String	Binding ID	R	-
front_api_id	String	API ID	CR	Yes
env_id	String	Environment ID	CR	Yes
acl_id	String	Access control policy ID	CR	Yes
create_time	Timestamp	Time when the access control policy is bound to the API	CR	No

4.11.2 Binding an Access Control Policy to an API

Function

This API is used to bind an access control policy to a specified API.

You can bind different access control policies to an API in different environments, but you can bind only one type of access control policy to the API in each environment.

URI

The following table lists the HTTPS request method and URI of the API.

Table 4-340 HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/acl-bindings

Request

Table 4-341 Parameter description

Parameter	Type	Description
acl_id	String	Access control policy ID
publish_ids	[]String	API publication record ID

Example request:

```
{
  "acl_id": "206bb985d8a04ec09f13c3e51ef77095",
  "publish_ids": [
    "1bc8b2b741a04bd4af3ef9d7cd003104"
  ]
}
```

Response

Table 4-342 Parameter description

Parameter	Type	Description
id	String	Binding ID
api_id	String	API ID
env_id	String	Environment ID
acl_id	String	Access control policy ID
create_time	Timestamp	Time when the access control policy is bound to the API

Example response:

```
[
  {
    "id": "4ffc0da71ddd4c22add8ff801e19846c",
    "api_id": "aebacac6095942b4b2dd2b209bb7b9bc",
    "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
    "acl_id": "206bb985d8a04ec09f13c3e51ef77095",
    "create_time": "2018-07-27T11:27:10.7470224Z"
  }
]
```

Status Codes

Table 4-343 Status codes

Status Code	Description
201	Created
400	Bad Request
403	Forbidden
404	Not Found
500	Server Internal Error

4.11.3 Querying the List of Access Control Policies Bound to an API

Function

This API is used to query the list of access control policies that have been bound to a specified API.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-344 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/acl-bindings/binded-acls[?page_no,page_size,api_id,env_id,env_name,acl_id,acl_name]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **api_id**, **env_id**, **env_name**, **acl_id**, **acl_name**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-345 Parameter description

Parameter	Mandatory	Type	Description
api_id	Yes	String	API ID
env_id	No	String	Environment ID
env_name	No	String	Environment name
acl_id	No	String	Access control policy ID
acl_name	No	String	Access control policy name
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .

Parameter	Mandatory	Type	Description
page_no	No	Integer	Page number. The default value is 1.

Request

N/A

Response

Table 4-346 Parameter description

Parameter	Type	Description
total	Integer	Number of access control policies bound to the API
size	Integer	Number of returned access control policies
acls	Dictionary	Access control policy list

Table 4-347 Parameter description of acls

Parameter	Type	Description
acl_id	String	Access control policy ID
acl_name	String	Access control policy name
acl_type	String	Access control type, which can be: <ul style="list-style-type: none"> ● PERMIT (whitelist) ● DENY (blacklist)
acl_value	String	Access control objects
entity_type	String	Object type, which can be: <ul style="list-style-type: none"> ● IP ● DOMAIN ● ADMIN
env_id	String	ID of the environment in which the access control policy takes effect
env_name	String	Name of the environment in which the access control policy takes effect
bind_id	String	Binding ID

Parameter	Type	Description
bind_time	Timestamp	Time when the access control policy is bound to the API

Example response:

```
{
  "total": 1,
  "size": 1,
  "acIs": [
    {
      "acl_id": "206bb985d8a04ec09f13c3e51ef77095",
      "acl_name": "acl_001",
      "entity_type": "IP",
      "acl_type": "PERMIT",
      "acl_value": "192.168.1.14,192.168.2.0/24,192.168.1.8-192.168.1.110",
      "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
      "env_name": "RELEASE",
      "bind_id": "4ffc0da71ddd4c22add8ff801e19846c",
      "bind_time": "2018-07-27T11:27:10Z"
    }
  ]
}
```

Status Codes

Table 4-348 Status codes

Status Code	Description
200	OK
400	Bad Request
403	Forbidden
404	Not Found
500	Server Internal Error

4.11.4 Querying the List of APIs Bound to an Access Control Policy

Function

This API is used to query the list of APIs bound to a specified access control policy.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-349 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/acl-bindings/binded-apis[?page_no,page_size,acl_id,env_id,api_id,api_name,group_id]

 **NOTE**

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **acl_id**, **api_id**, **api_name**, **group_id**, **env_id**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-350 Parameter description

Parameter	Mandatory	Type	Description
acl_id	Yes	String	Access control policy ID
api_id	No	String	API ID
api_name	No	String	API name
group_id	No	String	API group ID
env_id	No	String	Environment ID
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .

Request

N/A

Response

Table 4-351 Parameter description

Parameter	Type	Description
total	Integer	Number of APIs to which the access control policy has been bound
size	Integer	Number of returned APIs
apis	Dictionary	API list

Table 4-352 Parameter description of apis

Parameter	Type	Description
api_id	String	API ID
api_name	String	API name
group_name	String	API group name
api_type	Integer	API type
api_remark	String	Description of the API
env_id	String	ID of the environment in which the access control policy takes effect
env_name	String	Name of the environment in which the access control policy takes effect
bind_id	String	Binding ID
bind_time	Timestamp	Time when the access control policy is bound to the API
publish_id	String	ID of the API publication record

Example response:

```
{
  "total": 1,
  "size": 1,
  "apis": [
    {
      "api_id": "aebacac6095942b4b2dd2b209bb7b9bc",
      "api_name": "aaa",
      "group_name": "test001",
      "api_type": 1,
      "api_remark": "aaa",
      "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
      "env_name": "RELEASE",
      "bind_id": "4ffc0da71ddd4c22add8ff801e19846c",
      "bind_time": "2018-07-27T11:27:10Z",
      "publish_id": "1bc8b2b741a04bd4af3ef9d7cd003104"
    }
  ]
}
```

```
}
]
}
```

Status Codes

Table 4-353 Status codes

Status Code	Description
200	OK
400	Bad Request
403	Forbidden
404	Not Found
500	Server Internal Error

4.11.5 Querying the List of APIs Not Bound to an Access Control Policy

Function

This API is used to query the list of published APIs that have not been bound to a specified access control policy.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-354 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/acl-bindings/unbinded-apis[?page_no,page_size,acl_id,env_id,api_id,api_name,group-id]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **acl_id**, **env_id**, **api_id**, **group_id**, **api_name**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-355 Parameter description

Parameter	Mandatory	Type	Description
acl_id	Yes	String	Access control policy ID
env_id	No	String	Environment ID
group_id	No	String	API group ID
api_id	No	String	API ID
api_name	No	String	API name
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .

Request

N/A

Response

Table 4-356 Parameter description

Parameter	Type	Description
total	Integer	Number of APIs that match the query conditions
size	Integer	Number of returned APIs
apis	Dictionary	API list

Table 4-357 Parameter description of apis

Parameter	Type	Description
id	String	API ID
name	String	API name
group_id	String	ID of the API group to which the API belongs
group_name	String	Name of the API group to which the API belongs

Parameter	Type	Description
type	Integer	Opening status of the API
remark	String	Description of the API
run_env_name	String	Name of the environment in which the API has been published
run_env_id	String	ID of the environment in which the API has been published
publish_id	String	ID of the API publication record
acl_name	String	Name of the same type of access control policy that has been bound to the API
req_uri	String	Access address
auth_type	String	Security authentication mode

Example response:

```
{
  "total": 1,
  "size": 1,
  "apis": [
    {
      "name": "bbbb",
      "type": 1,
      "remark": "aaa",
      "group_id": "70f1b578da9b4dfe889b4c33d1b995c2",
      "id": "91c26288acea4448be205265d77dae22",
      "group_name": "test001",
      "run_env_name": "RELEASE",
      "run_env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
      "publish_id": "a6e06a00c382436eb524fa2dd343cb6d",
      "req_uri": "/test",
      "auth_type": "NONE"
    }
  ]
}
```

Status Codes

Table 4-358 Status codes

Status Code	Description
200	OK
400	Bad Request
403	Forbidden
404	Not Found
500	Server Internal Error

4.11.6 Unbinding an Access Control Policy from an API

Function

This API is used to unbind an access control policy from an API.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-359 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/acl-bindings/{id}

The following table lists the parameter in the URI.

Table 4-360 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Binding ID

Request

N/A

Response

N/A

Status Codes

Table 4-361 Status codes

Status Code	Description
204	No Content
403	Forbidden
404	Not Found
500	Server Internal Error

4.11.7 Unbinding Multiple Access Control Policies from APIs

Function

This API is used to unbind multiple access control policies from APIs.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-362 HTTP/HTTPS request method and URI

Request Method	URI
PUT	/v1.0/apigw/acl-bindings[?action]

The following table lists the parameter in the URI.

Table 4-363 Parameter description

Parameter	Mandatory	Type	Description
action	Yes	String	The value must be delete .

Request

Table 4-364 Parameter description

Parameter	Mandatory	Type	Description
acl_bindings	No	String Array	IDs of the access control policies to be unbound

Example request:

```
{
  "acl_bindings": ["81efcd94b8747a0b21e8c04144a4e8c","7addcd00cfab433984b1d8bf2fe08aaa"]
}
```

Response

Table 4-365 Parameter description

Parameter	Type	Description
success_count	Number	Number of successfully unbound access control policies
failure	Array	Error message and access control policies that fail to be unbound

Table 4-366 Parameter description of failure

Parameter	Type	Description
bind_id	String	ID of an access control policy that fails to be unbound
error_code	String	Error code
error_msg	String	Error message
api_id	String	ID of an API from which an access control policy fails to be unbound
api_name	String	Name of the API from which an access control policy fails to be unbound

Example response:

```
{
  "failure": [{
    "bind_id": "81efcfd94b8747a0b21e8c04144a4e8c",
    "error_code": "APIG.3010",
    "error_msg": "Access control policy binding record not found",
    "api_id": "81efcfd94b8747a0b21e8c04144a4e8c",
    "api_name": "api01"
  }],
  "success_count": 3
}
```

Status Codes

Table 4-367 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden

Status Code	Description
404	Not Found
500	Server Internal Error

4.12 Querying Subscription Information in the Marketplace

4.12.1 Querying the List of Purchased API Groups

Function

This API is used to query the list of purchased API groups.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-368 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/purchases/groups[? page_size, page_no, id, group_id, group_name]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **id**, **group_id**, **group_name**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-369 Parameter description

Parameter	Mandatory	Type	Description
id	No	String	Subscription ID
group_id	No	String	API group ID
group_name	No	String	API group name

Parameter	Mandatory	Type	Description
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .

Request

N/A

Response

Table 4-370 Parameter description

Parameter	Type	Description
total	Integer	Total number of API groups that match the query conditions
size	Integer	Number of returned API groups
purchases	Dictionary	API group list

Table 4-371 Parameter description of purchases

Parameter	Type	Description
id	String	Subscription ID
group_id	String	API group ID
group_name	String	API group name
group_remark	String	Description of the API group
order_time	Timestamp	Time when the order is placed
start_time	Timestamp	Time when the order takes effect
expire_time	Timestamp	Time when the order expires
group_domains	[]String	List of API group domain names. No value will be returned when you query the list of purchased API groups.
quota_left	Integer	Remaining API call quota

Parameter	Type	Description
quota_used	Integer	Used API call quota
app_key	String	Generated AppKey
app_secret	String	Generated AppSecret

Example response:

```
{
  "total": 3,
  "size": 3,
  "purchases": [{
    "id": "615af8d9-f31d-4cdf-8807-b191dc969a07",
    "group_id": "f0585333-5722-4878-b7fa-31ae00b6ae3a",
    "group_name": "api_group_003",
    "group_remark": "API group 003",
    "group_domains": null,
    "quota_used": 0,
    "quota_left": 2000000000,
    "order_time": "2017-12-29T06:22:46Z",
    "start_time": "2018-01-01T00:00:00Z",
    "expire_time": "2019-01-01T00:00:00Z",
    "app_key": "0e242685-661d-4254-a8bb-be9a92b04785",
    "app_secret": "*****"
  },
  {
    "id": "9d0bdab1-a553-4bc9-be8c-a2e6c08e4d13",
    "group_id": "02a8ab3c-b278-4de5-a096-852829671ae7",
    "group_name": "api_group_002",
    "group_remark": "API group 002",
    "group_domains": null,
    "quota_used": 0,
    "quota_left": 2000000000,
    "order_time": "2017-12-29T06:22:46Z",
    "start_time": "2018-01-01T00:00:00Z",
    "expire_time": "2019-01-01T00:00:00Z",
    "app_key": "0e242685-661d-4254-a8bb-be9a92b04785",
    "app_secret": "*****"
  },
  {
    "id": "3f30d49b-220f-4b11-9e94-c2fd3c1cc587",
    "group_id": "73c58022-f20d-495a-a188-85d718647f09",
    "group_name": "api_group_001",
    "group_remark": "API group 001",
    "group_domains": null,
    "quota_used": 0,
    "quota_left": 2000000000,
    "order_time": "2017-12-29T06:16:03Z",
    "start_time": "2018-01-01T00:00:00Z",
    "expire_time": "2019-01-01T00:00:00Z",
    "app_key": "0e242685-661d-4254-a8bb-be9a92b04785",
    "app_secret": "*****"
  }
  ]
}
```


Status Codes

Table 4-372 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
500	Server Internal Error

4.12.2 Querying Details of a Purchased API Group

Function

This API is used to query the details of a purchased API group.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-373 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/purchases/groups/ {purchase_id}

The following table lists the parameter in the URI.

Table 4-374 Parameter description

Parameter	Mandatory	Type	Description
purchase_id	Yes	String	Subscription ID

Request

N/A

Response

Table 4-375 Parameter description

Parameter	Type	Description
id	String	Subscription ID
group_id	String	API group ID
group_name	String	API group name
group_remark	String	Description of the API group
order_time	Timestamp	Time when the order is placed
start_time	Timestamp	Time when the order takes effect
expire_time	Timestamp	Time when the order expires
group_domains	[]String	List of API group domain names. A value will be returned when you query the details of a purchased API group.
quota_left	Integer	Remaining API call quota
quota_used	Integer	Used API call quota
app_key	String	Generated AppKey
app_secret	String	Generated AppSecret

Example response:

```
{
  "id": "3f30d49b-220f-4b11-9e94-c2fd3c1cc587",
  "group_id": "73c58022-f20d-495a-a188-85d718647f09",
  "group_name": "api_group_001",
  "group_remark": "API group 001",
  "group_domains": [
    "test.market.example.com"
  ],
  "quota_used": 0,
  "quota_left": 2000000000,
  "order_time": "2018-01-02T10: 51: 26Z",
  "start_time": "2018-01-01T00: 00: 00Z",
  "expire_time": "2019-01-01T00: 00: 00Z",
  "app_key": "0e242685-661d-4254-a8bb-be9a92b04785",
  "app_secret": "*****"
}
```

Status Codes

Table 4-376 Status codes

Status Code	Description
200	OK

Status Code	Description
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

4.12.3 Querying the List of Purchased APIs

Function

This API is used to query the list of purchased APIs.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-377 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/purchases/apis[?page_size, page_no, api_id, api_name, group_id, group_name]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **api_id**, **api_name**, **group_id**, **group_name**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-378 Parameter description

Parameter	Mandatory	Type	Description
api_id	No	String	API ID
api_name	No	String	API name
group_id	No	String	API group ID
group_name	No	String	API group name

Parameter	Mandatory	Type	Description
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .

Request

N/A

Response

Table 4-379 Parameter description

Parameter	Type	Description
total	Integer	Total number of APIs that match the query conditions
size	Integer	Number of returned APIs
apis	Dictionary	API list

Table 4-380 Parameter description of apis

Parameter	Type	Description
id	String	API ID
name	String	API name
purchase_id	String	Subscription ID
remark	String	Description of the API
req_uri	String	Access address

Example response:

```
{
  "total": 3,
  "size": 3,
  "apis": [{
    "id": "cb498965-8acf-4c98-bd08-4033ef1fcb4",
    "name": "Environment_list_query",
    "purchase_id": "730f8a84-c8db-45ba-a6a5-2669ceb08574",
    "remark": "Environment list query",
```

```

    "req_uri": "/envs"
  },
  {
    "id": "5bbc47e2-95b0-4a56-904e-a3cdc422f8e9",
    "name": "API_group_list_query",
    "purchase_id": "2ae11f50-3938-4560-8b76-58e89bb3f825",
    "remark": "API group list query",
    "req_uri": "/groups"
  },
  {
    "id": "6632a062-9dcf-4f18-9646-3cabb925a290",
    "name": "API_list_query",
    "purchase_id": "2ae11f50-3938-4560-8b76-58e89bb3f825",
    "remark": "API list query",
    "req_uri": "/apis"
  }
}

```

Status Codes

Table 4-381 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
500	Server Internal Error

4.13 Resource Query

4.13.1 Querying API Group Quantities

Function

This API is used to query the number of API groups that have been listed and the number of API groups that have not been listed.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-382 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/resources/outline/groups

Request

N/A

Response

Table 4-383 Parameter description

Parameter	Type	Description
offsell_nums	Integer	Number of API groups that have not been listed on the marketplace
onsell_nums	Integer	Number of API groups that have been listed on the marketplace

Example response:

```
{
  "offsell_nums": 1,
  "onsell_nums": 2
}
```

Status Codes

Table 4-384 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

4.13.2 Querying API Quantities

Function

This API is used to query the number of APIs that have been published in the RELEASE environment and the number of APIs that have not been published.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-385 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/resources/outline/apis

Request

N/A

Response

Table 4-386 Parameter description

Parameter	Type	Description
instance_num	Integer	Total number of APIs
nums_off_release	Integer	Number of APIs that have not been published in the RELEASE environment
nums_on_release	Integer	Number of APIs that have been published in the RELEASE environment

Example response:

```
{
  "instance_num": 3,"nums_off_release": 1,
  "nums_on_release": 2
}
```

Status Codes

Table 4-387 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

4.13.3 Querying App Quantities

Function

This API is used to query the number of apps that have been authorized to access APIs and the number of apps that have not been authorized to access APIs.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-388 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/resources/outline/apps

Request

N/A

Response

Table 4-389 Parameter description

Parameter	Type	Description
authed_nums	Integer	Number of apps that have been authorized to access APIs
unauthed_nums	Integer	Number of apps that have not been authorized to access APIs

Example response:

```
{
  "authed_nums": 1,
  "unauthed_nums": 2
}
```

Status Codes

Table 4-390 Status codes

Status Code	Description
200	OK
400	Bad Request

Status Code	Description
401	Unauthorized
403	Forbidden
500	Server Internal Error

4.14 Signature Key Management

4.14.1 Object Model

This section describes the object model for signature key management.

 **NOTE**

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of C is mandatory.

Table 4-391 Object model for signature key management

Parameter	Type	Description	Operation Type	Mandatory
id	String	Signature key ID	R	-
name	String	Signature key name	CRU	Yes
sign_key	String	Signature key	CRU	Yes
sign_secret	String	Signature secret	CRU	Yes
create_time	Timestamp	Time when the signature key is created	R	-
update_time	Timestamp	Time when the signature key was last updated	R	-

4.14.2 Creating a Signature Key

Function

It is a good practice to provide a protection mechanism for APIs to ensure access security. For example, authenticating API request sources and denying the access from unauthorized sources.

A signature key is a protection mechanism in case.

Create a signature key and bind it to an API. When requesting the API, API Gateway uses the signature key to encrypt request parameter data and generate a

signature. The backend service of the API verifies requests by using the signature. Unauthorized requests will be denied to protect the API against attacks from unknown sources.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-392 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/signs

Request

Table 4-393 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Signature key name The name of a signature key consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
sign_key	No	String	Signature key A signature key consists of 8–32 characters, starting with a letter or digit. Only letters, digits, hyphens (-), and underscores (_) are allowed. A key is automatically generated by the backend if no key is specified.
sign_secret	No	String	Signature secret A signature secret consists of 16–64 characters, starting with a letter or digit. Only letters, digits, and special characters (-_!@#%) are allowed. A value is automatically generated by the backend if no value is specified.

Example request:

```
{
  "name": "signature01",
  "sign_key": "abcd_123",
  "sign_secret": "*****"
}
```

Response

Table 4-394 Parameter description

Parameter	Type	Description
id	String	Signature key ID
name	String	Signature key name
sign_key	String	Signature key
sign_secret	String	Signature secret
create_time	Timestamp	Time when the signature key is created
update_time	Timestamp	Time when the signature key was last updated

Example response:

```
{
  "name": "signature01",
  "sign_key": "abcd_123",
  "sign_secret": "*****",
  "id": "3a793b65a9034bdfae08924f149bfb4a",
  "create_time": "2018-02-06T12:17:36.039953112Z",
  "update_time": "2018-02-06T12:17:36.039954198Z"
}
```

Status Codes

Table 4-395 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

4.14.3 Modifying a Signature Key

Function

This API is used to modify the information about a signature key.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-396 HTTP/HTTPS request method and URI

Request Method	URI
PUT	/v1.0/apigw/signs/{id}

The following table lists the parameter in the URI.

Table 4-397 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Signature key ID

Request

Table 4-398 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Signature key name The name of a signature key consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
sign_key	No	String	Signature key A signature key consists of 8–32 characters, starting with a letter or digit. Only letters, digits, hyphens (-), and underscores (_) are allowed. A key is automatically generated by the backend if no key is specified.
sign_secret	No	String	Signature secret A signature secret consists of 16–64 characters, starting with a letter or digit. Only letters, digits, and special characters (-_!@#)\$%) are allowed. A value is automatically generated by the backend if no value is specified.

Example request:

```
{
  "name": "signature01",
  "sign_key": "abcd_1234",
  "sign_secret": "*****"
}
```

Response

Table 4-399 Parameter description

Parameter	Type	Description
id	String	Signature key ID
name	String	Signature key name
sign_key	String	Signature key
sign_secret	String	Signature secret
create_time	Timestamp	Time when the signature key is created
update_time	Timestamp	Time when the signature key was last updated

Example response:

```
{
  "name": "signature01",
  "sign_key": "abcd_123",
  "sign_secret": "*****",
  "id": "3a793b65a9034bdfae08924f149bfb4a",
  "create_time": "2018-02-06T12:17:36.039953112Z",
  "update_time": "2018-02-06T12:17:36.039954198Z"
}
```

Status Codes

Table 4-400 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.14.4 Deleting a Signature Key

Function

This API is used to delete a specified signature key.

This operation will invalidate the signature key and unbind it from relevant APIs.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-401 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/signs/{id}

The following table lists the parameter in the URI.

Table 4-402 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Signature key ID

Request

N/A

Response

N/A

Status Codes

Table 4-403 Status codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.14.5 Querying the Signature Key List

Function

This API is used to query the information about all signature keys.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-404 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/signs[?page_size, page_no, id, name]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **id** and **name**.

Request

Table 4-405 Parameter description

Parameter	Mandatory	Type	Description
id	No	String	Signature key ID
name	No	String	Signature key name
precise_search	No	String	Parameter name (name) for exact matching

Response

Table 4-406 Parameter description

Parameter	Type	Description
total	Integer	Number of signature keys that match the query conditions
size	Integer	Length of the returned signature key list
signs	Dictionary	Signature key list

Table 4-407 Parameter description of signs

Parameter	Type	Description
id	String	Signature key ID
name	String	Signature key name
sign_key	String	Signature key
sign_secret	String	Signature secret
create_time	Timestamp	Time when the signature key is created
update_time	Timestamp	Time when the signature key was last updated
bind_num	Integer	Number of APIs to which the signature key has been bound

Example response:

```
{
  "total": 2,
  "size": 2,
  "signs": [{
    "name": "signature01",
    "sign_key": "abcd_1234",
    "sign_secret": "*****",
    "id": "3a793b65a9034bdfae08924f149bfb4a",
    "create_time": "2018-02-06T12:17:36Z",
    "update_time": "2018-02-07T02:00:27.964766Z",
    "bind_num":1
  },
  {
    "name": "sada",
    "sign_key": "asdasdasdasda",
    "sign_secret": "*****",
    "id": "51ce490901f4411fa54eb06d33bd7218",
    "create_time": "2018-02-06T11:53:08Z",
    "update_time": "2018-02-06T11:53:08Z",
    "bind_num":1
  }
  ]
}
```

Status Codes

Table 4-408 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
500	Server Internal Error

4.15 Binding Signature Keys

4.15.1 Object Model

This section describes the object model for binding a signature key to an API.

 NOTE

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of C is mandatory.

Table 4-409 Object model for binding a signature key to an API

Parameter	Type	Description	Operation Type	Mandatory
id	String	Binding ID	R	-
front_api_id	String	API ID	CR	Yes
sign_id	String	Signature key ID	CR	Yes
env_id	String	Environment ID	CR	Yes
create_time	Timestamp	Time when the signature key is bound to the API	R	No

4.15.2 Querying the List of APIs Not Bound to a Signature Key

Function

This API is used to query the list of APIs that have not been bound to a specified signature key. Only published APIs will be displayed.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-410 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/sign-bindings/unbound-apis[?page_size, page_no, sign_id, env_id, api_id, api_name, group_id]

 NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **sign_id**, **env_id**, **api_id**, **api_name**, **group_id**, **page_size**, and **page_no**.

Request

Table 4-411 Parameter description

Parameter	Mandatory	Type	Description
sign_id	Yes	String	Signature key ID
env_id	No	String	Environment ID
api_id	No	String	API ID
api_name	No	String	API name
group_id	No	String	API group ID

Response

Table 4-412 Parameter description

Parameter	Type	Description
total	Integer	Total number of APIs that match the query conditions
size	Integer	Length of the returned API list
apis	Dictionary	API list

Table 4-413 Parameter description of apis

Parameter	Type	Description
id	String	API ID
name	String	API name
type	Integer	API type
remark	String	Description of the API
group_id	String	ID of the API group to which the API belongs
group_name	String	Name of the API group to which the API belongs

Parameter	Type	Description
run_env_name	String	Name of the environment in which the API has been published
run_env_id	String	ID of the environment in which the API has been published
publish_id	String	API publication record ID
signature_name	String	Name of the signature key bound to the API
auth_type	String	Security authentication mode
req_uri	String	Access address

Example response:

```
{
  "total": 2,
  "size": 2,
  "apis": [
    {
      "name": "bbb",
      "type": 1,
      "group_id": "7ccc0b94-eb5a-48e6-8554-6d0105a540e2",
      "id": "3c6769c6-ec61-4b45-b478-c60310dbaa1b",
      "group_name": "asd",
      "run_env_name": "das",
      "run_env_id": "1fdb2e4-f90a-4159-817d-98c9b8e8b215",
      "publish_id": "6dff16c4-813f-486a-bba4-fdad45a55a70",
      "auth_type": "NONE",
      "req_uri": "/test"
    },
    {
      "name": "aaa",
      "type": 1,
      "group_id": "7ccc0b94-eb5a-48e6-8554-6d0105a540e2",
      "id": "d85c502a-f916-47e8-bba0-50537a2d1af2",
      "group_name": "asd",
      "run_env_name": "das",
      "run_env_id": "1fdb2e4-f90a-4159-817d-98c9b8e8b215",
      "publish_id": "dec83400-a0c6-4ea6-abfd-5bf237292f4d",
      "auth_type": "NONE",
      "req_uri": "/test"
    }
  ]
}
```

Status Codes

Table 4-414 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized

Status Code	Description
403	Forbidden
404	Not Found
500	Server Internal Error

4.15.3 Binding a Signature Key

Function

A signature key takes effect only after being bound to an API. When requesting the backend service, API Gateway uses the signature key to cryptographically sign requests. The backend service verifies the signature to identify request sources.

This API is used to bind a signature key to one or more published APIs.

Different signature keys can be bound to an API in different environments, but only one signature key can be bound to the API in the same environment.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-415 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/sign-bindings

Request

Table 4-416 Parameter description

Parameter	Mandatory	Type	Description
sign_id	Yes	String	Signature key ID
publish_ids	Yes	Array of strings	API publication record ID

Example request:

```
{
  "sign_id": "3a793b65a9034bdfae08924f149bfb4a",
  "publish_ids": [
    "374a6d5a-20c7-4ea1-82e1-19fce4556956",
    "65e6fe53-1ac3-4481-ba36-9f0bc6f22057"
  ]
}
```

```
]
}
```

Response

Table 4-417 Parameter description

Parameter	Type	Description
-	Dictionary	List of APIs bound to the signature key

Table 4-418 Parameter description of the API list

Parameter	Type	Description
id	String	Binding ID
api_id	String	API ID
api_name	String	API name
api_remark	String	Description of the API
group_name	String	Name of the API group to which the API belongs
api_type	Integer	API type
sign_id	String	Signature key ID
sign_name	String	Signature key name
sign_key	String	Signature key
sign_secret	String	Signature secret
env_id	String	ID of the environment in which the API has been published
env_name	String	Name of the environment in which the API has been published
binding_time	Timestamp	Time when the signature key is bound to the API
publish_id	String	ID of the publication record

Example response:

```
[
  {
    "id": "d8426fb090e442c4a56a35e451bea085",
    "api_id": "3c6769c6-ec61-4b45-b478-c60310dbaa1b",
    "api_name": "bbb",
    "api_remark": "",
    "group_name": "asd",
    "api_type": 1,
```

```

"sign_id": "3a793b65a9034bdfae08924f149bfb4a",
"sign_name": "signature01",
"sign_key": "abcd_1234",
"sign_secret": "*****",
"env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
"env_name": "RELEASE",
"binding_time": "2018-02-07T03:17:26.396039456Z",
"publish_id": "23234202f5834ab69113fc1b790b6bed"
},
{
  "id": "97952732e6d7452d99de02db99acce27",
  "api_id": "d85c502a-f916-47e8-bba0-50537a2d1af2",
  "api_name": "aaa",
  "api_remark": "",
  "group_name": "asd",
  "api_type": 1,
  "sign_id": "3a793b65a9034bdfae08924f149bfb4a",
  "sign_name": "signature01",
  "sign_key": "abcd_1234",
  "sign_secret": "*****",
  "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
  "env_name": "RELEASE",
  "binding_time": "2018-02-07T03:17:26.39803282Z",
  "publish_id": "6581f68efddc4ff0815e156ec6ecfb52"
}
]

```

Status Codes

Table 4-419 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.15.4 Querying the List of APIs Bound to a Signature Key

Function

This API is used to query the list of APIs that have been bound to a specified signature key.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-420 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/sign-bindings/binded-apis[?page_size, page_no, sign_id, env_id, api_id, api_name, group_id]

 **NOTE**

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **sign_id**, **env_id**, **api_id**, **api_name**, **group_id**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-421 Parameter description

Parameter	Mandatory	Type	Description
sign_id	Yes	String	Signature key ID
env_id	No	String	Environment ID
api_id	No	String	API ID
api_name	No	String	API name
group_id	No	String	API group ID

Request

N/A

Response

Table 4-422 Parameter description

Parameter	Type	Description
total	Integer	Total number of APIs that match the query conditions
size	Integer	Length of the returned API list
bindings	Dictionary	API list

Table 4-423 Parameter description of bindings

Parameter	Type	Description
id	String	Binding ID
api_id	String	API ID
api_name	String	API name
api_remark	String	Description of the API
group_name	String	Name of the API group to which the API belongs
api_type	Integer	API type
sign_id	String	Signature key ID
sign_name	String	Signature key name
sign_key	String	Signature key
sign_secret	String	Signature secret
env_id	String	ID of the environment in which the API has been published
env_name	String	Name of the environment in which the API has been published
binding_time	Timestamp	Time when the signature key is bound to the API
publish_id	String	API publication ID

Example response:

```
{
  "total": 2,
  "size": 2,
  "bindings": [
    {
      "id": "4588ec6f5dab4f67b298dc693f58029e",
      "api_id": "d85c502a-f916-47e8-bba0-50537a2d1af2",
      "api_name": "aaa",
      "api_remark": "",
      "group_name": "asd",
      "api_type": 1,
      "sign_id": "3a793b65a9034bdfae08924f149bfb4a",
      "sign_name": "signature01",
      "sign_key": "abcd_1234",
      "sign_secret": "*****",
      "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
      "env_name": "RELEASE",
      "binding_time": "2018-02-07T07:08:51Z",
      "publish_id": "3a793b65a9034bdfae08924f149bfsda"
    },
    {
      "id": "d8426fb090e442c4a56a35e451bea085",
      "api_id": "3c6769c6-ec61-4b45-b478-c60310dbaa1b",
      "api_name": "bbb",
      "api_remark": ""
    }
  ]
}
```



```

"group_name": "asd",
"api_type": 1,
"sign_id": "3a793b65a9034bdfae08924f149bfb4a",
"sign_name": "signature01",
"sign_key": "abcd_1234",
"sign_secret": "*****",
"env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
"env_name": "RELEASE",
"binding_time": "2018-02-07T03:17:26Z",
"publish_id": "3a793b65a9034bdfae08924f149bfsda"
}
]
}

```

Status Codes

Table 4-424 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.15.5 Querying the List of Signature Keys Bound to an API

Function

This API is used to query the list of signature keys that have been bound to a specified API. Only one signature key can be bound to an API in an environment.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-425 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/sign-bindings/binded-signs[?page_no, page_size, api_id, sign_id, sign_name,env_id]

 NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **api_id**, **sign_id**, **sign_name**, **env_id**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-426 Parameter description

Parameter	Mandatory	Type	Description
api_id	Yes	String	API ID
sign_id	No	String	Signature key ID
sign_name	No	String	Signature key name
env_id	No	String	Environment ID

Request

N/A

Response

Table 4-427 Parameter description

Parameter	Type	Description
total	Integer	Total number of signature keys that match the query conditions
size	Integer	Length of the returned signature key list
bindings	Dictionary	Signature key list

Table 4-428 Parameter description of bindings

Parameter	Type	Description
id	String	Binding ID
api_id	String	API ID
api_name	String	API name
api_remark	String	Description of the API
group_name	String	Name of the API group to which the API belongs
api_type	Integer	API type

Parameter	Type	Description
sign_id	String	Signature key ID
sign_name	String	Signature key name
sign_key	String	Signature key
sign_secret	String	Signature secret
env_id	String	ID of the environment in which the API has been published
env_name	String	Name of the environment in which the API has been published
binding_time	Timestamp	Time when the signature key is bound to the API
publish_id	String	API publication ID

Example response:

```
{
  "total": 2,
  "size": 2,
  "bindings": [
    {
      "id": "4588ec6f5dab4f67b298dc693f58029e",
      "api_id": "d85c502a-f916-47e8-bba0-50537a2d1af2",
      "api_name": "aaa",
      "api_remark": "",
      "group_name": "asd",
      "api_type": 1,
      "sign_id": "3a793b65a9034bdfae08924f149bfb4a",
      "sign_name": "signature01",
      "sign_key": "abcd_1234",
      "sign_secret": "*****",
      "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
      "env_name": "RELEASE",
      "binding_time": "2018-02-07T07: 08: 51Z",
      "publish_id": "3a793b65a9034bdfae08924f149bfsda"
    },
    {
      "id": "d8426fb090e442c4a56a35e451bea085",
      "api_id": "3c6769c6-ec61-4b45-b478-c60310dbaa1b",
      "api_name": "bbb",
      "api_remark": "",
      "group_name": "asd",
      "api_type": 1,
      "sign_id": "3a793b65a9034bdfae08924f149bfb4a",
      "sign_name": "signature01",
      "sign_key": "abcd_1234",
      "sign_secret": "*****",
      "env_id": "DEFAULT_ENVIRONMENT_RELEASE_ID",
      "env_name": "RELEASE",
      "binding_time": "2018-02-07T03: 17: 26Z",
      "publish_id": "3a793b65a9034bdfae08924f149bfsda"
    }
  ]
}
```

Status Codes

Table 4-429 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.15.6 Unbinding a Signature Key

Function

This API is used to unbind a signature key from an API.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-430 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/sign-bindings/{id}

The following table lists the parameter in the URI.

Table 4-431 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Binding ID

Request

N/A

Response

N/A

Status Codes

Table 4-432 Status codes

Status Code	Description
204	No Content
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.16 Domain Name Management

4.16.1 Object Model

This section describes the object models for certificates and user-defined domain names.

 **NOTE**

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of C is mandatory.

Table 4-433 Domain name object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	Domain ID	R	-
url_domain	String	Domain name	CR	Yes
cname_status	Integer	CNAME resolution status, which can be: <ul style="list-style-type: none"> • 1: not resolved • 2: in progress • 3: successful • 4: failed 	R	No
ssl_id	String	Certificate ID	R	No
group_id	String	API group ID	CR	Yes

Table 4-434 Certificate object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	Certificate ID	R	-
name	String	Certificate name	CRU	Yes
context	String	Content of the certificate	CRU	Yes
private_key	String	Private key of the certificate	CRU	Yes

4.16.2 Binding a Domain Name

Function

Domain names are user-defined, and take effect only after CNAME records are added to point the domain names to subdomain names of API groups. For details, see .

An API group can be bound to a maximum of five domain names. After you bind a domain name to an API group, APIs in the group can be called using the domain name.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-435 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/api-groups/{group_id}/domains

The following table lists the parameter in the URI.

Table 4-436 Parameter description

Parameter	Mandatory	Type	Description
group_id	Yes	String	API group ID

Request

Table 4-437 Parameter description

Parameter	Mandatory	Type	Description
url_domain	Yes	String	Domain name A domain name consists of a maximum of 255 characters and must comply with domain name specifications.

Example request:

```
{
  "url_domain": "www.MyCompany.com"
}
```

Response

Table 4-438 Parameter description

Parameter	Type	Description
id	String	Domain ID
url_domain	String	Domain name
status	Integer	CNAME resolution status, which can be: <ul style="list-style-type: none"> • 1: not resolved • 2: in progress • 3: successful • 4: failed

Example response:

```
{
  "id": "c5e0d5ba62a34d26ad5c709ae22c1a17",
  "url_domain": "www.MyCompany.com",
  "status": 3
}
```

Status Codes

Table 4-439 Status codes

Status Code	Description
201	Created

Status Code	Description
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.16.3 Unbinding a Domain Name

Function

This API is used to unbind a custom domain name from an API group.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-440 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/api-groups/{group_id}/domains/{id}

The following table lists the parameter in the URI.

Table 4-441 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Domain ID
group_id	Yes	String	API group ID

Request

N/A

Response

N/A

Status Codes

Table 4-442 Status codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.16.4 Adding a Certificate to a Domain Name

Function

When you create an API to be accessed through HTTPS, you must add an SSL certificate to the independent domain name that has been bound to the group the API belongs to.

This API is used to add a certificate to a specific domain name.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-443 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/api-groups/{group_id}/domains/{domain_id}/certificate

The following table lists the parameters in the URI.

Table 4-444 Parameter description

Parameter	Mandatory	Type	Description
group_id	Yes	String	API group ID
domain_id	Yes	String	Domain ID

Request

Table 4-445 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Certificate name A certificate name consists of 4–50 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
cert_content	Yes	String	Content of the certificate
private_key	Yes	String	Private key

Example request:

```
{
  "cert_content": "example",
  "name": "test_ssl",
  "private_key": "example"
}
```

Response

Table 4-446 Parameter description

Parameter	Type	Description
id	String	Domain ID
url_domain	String	Domain name
status	Integer	CNAME resolution status
ssl_id	String	Certificate ID
ssl_name	String	Certificate name

Example response:

```
{
  "id": " b9be707660c5406394f8973e087bae20",
  "url_domain": "www.example.com",
  "status": 3,
  "ssl_id": "0a515af69f4e4dcca84fbf85f68c0e27",
  "ssl_name": "Certificate"
}
```

Status Codes

Table 4-447 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.16.5 Deleting a Certificate Bound to a Domain Name

Function

This API is used to delete a certificate that is no longer needed or has expired.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-448 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/api-groups/{group_id}/domains/{domain_id}/certificate/{id}

The following table lists the parameter in the URI.

Table 4-449 Parameter description

Parameter	Mandatory	Type	Description
group_id	Yes	String	API group ID
domain_id	Yes	String	Domain ID
id	Yes	String	Certificate ID

Request

N/A

Response

N/A

Status Codes

Table 4-450 Status codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.16.6 Querying Details of a Certificate Bound to a Domain Name

Function

This API is used to query the details of a specified certificate bound to a domain name.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-451 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/api-groups/{group_id}/domains/{domain_id}/certificate/{id}

The following table lists the parameters in the URI.

Table 4-452 Parameter description

Parameter	Mandatory	Type	Description
group_id	Yes	String	API group ID

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID
id	Yes	String	Certificate ID

Request

N/A

Response

Table 4-453 Parameter description

Parameter	Type	Description
common_name	String	Certificate domain name
san	Dictionary	Subject alternative name (SAN)
version	String	Certificate version
organization	Dictionary	Company or organization
organizational_unit	Dictionary	Department
locality	Dictionary	City
state	Dictionary	Province or state
country	Dictionary	Country or region
not_before	Timestamp	Start time of the certificate validity period
not_after	Timestamp	Expiration time of the certificate validity period
serial_number	String	SN
issuer	Dictionary	Certificate issuer
signature_algorithm	String	Signature algorithm

Example response:

```
{
  "san": [
    "xxx.xxx.xxx"
  ],
  "country": [
    "CN"
  ],
  "not_before": "2019-04-29T11:49:18Z",
```

```

"locality": [
  "ShenZhen"
],
"serial_number": "00000000000000000000000000000000",
"version": 3,
"issuer": [
  "XXX"
],
"not_after": "2029-04-29T11:49:18Z",
"organization": [
  "XXX"
],
"signature_algorithm": "SHA256-RSA",
"state": [
  "XXX"
],
"common_name": "xxx.xxx.xxx",
"organizational_unit": [
  "XXX"
]
}

```

Status Codes

Table 4-454 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.17 VPC Channel Management

4.17.1 Object Model

This section describes the object models for VPC channel management.

 **NOTE**

- **Operation Type** indicates the operation that can be performed on a field.
C: create; U: update; R: read
- **Mandatory** indicates whether a field with the **Operation Type** of **C** is mandatory.

Table 4-455 VPC channel object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	VPC channel ID	R	-
name	String	VPC channel name	CRU	Yes
type	Integer	VPC channel type, which can be: <ul style="list-style-type: none"> • 2: built-in channel 	CRU	Yes
status	Integer	VPC channel status, which can be: <ul style="list-style-type: none"> • 1: normal • 2: abnormal 	R	Yes
project_id	String	Tenant ID	CRU	Yes
port	Integer	Port number	CR	Yes
balance_strategy	Integer	Distribution algorithm, which can be: <ul style="list-style-type: none"> • 1: weighted round robin (WRR) • 2: weighted least connection (WLC) • 3: source hashing (SH) • 4: URI hashing 	CRU	Yes
create_time	Timestamp	Time when the VPC channel is created	R	Yes

Table 4-456 Health check object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	Health check ID	R	-
vpc_id	String	VPC channel ID	CRU	Yes
protocol	String	Protocol for health checks, which can be: <ul style="list-style-type: none"> • tcp • http 	CRU	Yes
path	Integer	Path for health checks, which is valid only when protocol is set to http	CRU	No

Parameter	Type	Description	Operation Type	Mandatory
port	Integer	Port number. The port number of the VPC channel will be used if no value is specified.	CRU	No
threshold_normal	Integer	Healthy threshold	CRU	Yes
threshold_abnormal	Integer	Unhealthy threshold	CRU	Yes
time_out	Integer	Timeout to wait for a response	CRU	Yes
time_interval	Integer	Interval between consecutive checks	CRU	Yes
http_code	String	Success codes, which are valid only when protocol is set to http	CRU	No
create_time	Timestamp	Time when the health check configuration is created	R	Yes

Table 4-457 Backend instance object model

Parameter	Type	Description	Operation Type	Mandatory
id	String	Backend instance object ID	R	-
vpc_id	String	VPC channel ID	CRU	Yes
ext_vpc_id	String	ID of the VPC associated with the backend instance object This parameter is not used currently.	R	Yes
instance_id	String	Instance ID	CRU	No
instance_name	String	Instance name	CRU	No
host	String	IP address of the backend instance object	CRU	Yes

Parameter	Type	Description	Operation Type	Mandatory
status	Integer	Status of the backend instance object <ul style="list-style-type: none"> • 1: normal • 2: abnormal 	R	Yes
weight	Integer	Weight	CRU	Yes
create_time	Timestamp	Time when the member is created	R	Yes

4.17.2 Creating a VPC Channel

Function

This API is used to create a VPC channel from API Gateway to your private VPC resources. Afterwards, when creating an API, you can configure your backend service to use this VPC channel so that API Gateway can directly access your private VPC resources.

 **NOTE**

You can create a maximum of 30 VPC channels.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-458 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/vpc-channels

Request

Table 4-459 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	VPC channel name A VPC channel name consists of 3–64 characters, starting with a letter. Only letters, digits, hyphens (-), and underscores (_) are allowed.

Parameter	Mandatory	Type	Description
type	Yes	Integer	VPC channel type, which can be: <ul style="list-style-type: none"> • 2: fast channel with the load balancing function
member_type	Mandatory if type is 2	String	Member type of the VPC channel, which can be: <ul style="list-style-type: none"> • ip (not supported currently) • instance This parameter is valid only when the VPC channel type is set to 2 . The default value is instance .
port	Mandatory if type is 2	Integer	Host port of the VPC channel This parameter is valid only when the VPC channel type is set to 2 . The value range is 1–65535.
balance_strategy	Mandatory if type is 2	Integer	Distribution algorithm, which can be: <ul style="list-style-type: none"> • 1: WRR • 2: WLC • 3: SH • 4: URI hashing This parameter is valid only when the VPC channel type is set to 2 . The default value is 1 .
vpc_health_config	Mandatory if type is 2	Dictionary	Health check details. This parameter is valid only when the VPC channel type is set to 2 .

Table 4-460 Health check details

Parameter	Mandatory	Type	Description
protocol	Yes	String	Protocol for performing health checks on cloud servers in the VPC channel. The value can be: <ul style="list-style-type: none"> • TCP • HTTP • HTTPS

Parameter	Mandatory	Type	Description
path	Required when protocol is set to http .	String	Destination path for health checks NOTE The value of this parameter must comply with URI specifications.
port	No	Integer	Destination port for health checks. By default, the host port of the VPC channel is used. Range: 1–65535
threshold_normal	Yes	Integer	Healthy threshold It refers to the number (x) of consecutive successful checks required for a cloud server to be marked as healthy. Range: 2–10
threshold_abnormal	Yes	Integer	Unhealthy threshold It refers to the number (x) of consecutive failed checks required for a cloud server to be marked as unhealthy. Range: 2–10
time_out	Yes	Integer	Timeout for determining whether a health check fails. Unit: s. The value must be less than the value of time_interval . Range: 2–30
time_interval	Yes	Integer	Interval between consecutive checks. Unit: s. The value must be greater than the value of time_out . Range: 5–300
http_code	Required when protocol is set to http .	String	HTTP response codes for determining a successful HTTP response The value can be any integer within 100–599 in one of the following formats: <ul style="list-style-type: none"> • Multiple values, for example, 200,201,202 • Range, for example, 200-299 • Multiple values and ranges, for example, 201,202,210-299

Table 4-461 Backend instance list

Parameter	Mandatory	Type	Description
instance_name	Yes	String	Backend instance name The name must contain 1–64 characters. Only letters, digits, periods (.), hyphens (-), and underscores (_) are allowed.
instance_id	Yes	String	Backend instance ID The ID must contain 1–64 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed.
weight	Mandatory if type is 2	Integer	Cloud server weight The larger the weight is, the more requests are forwarded to the backend instance. This parameter is valid only when the VPC channel type is set to 2. The value range is 1–100.

Example request:

```
{
  "balance_strategy": 1,
  "name": "vpc_001",
  "port": 15565,
  "type": 2,
  "member_type": "instance",
  "vpc_health_config": {
    "http_code": "205",
    "path": "/hc",
    "port": 15563,
    "protocol": "http",
    "threshold_abnormal": 5,
    "threshold_normal": 5,
    "time_interval": 200,
    "time_out": 30
  },
  "vpc_instances": [
    {
      "instance_id": "instance01",
      "instance_name": "instance_name01",
      "weight": 10
    }
  ]
}
```

Response

Table 4-462 Parameter description

Parameter	Type	Description
id	String	VPC channel ID

Parameter	Type	Description
name	String	VPC channel name
type	Integer	VPC channel type, which can be: <ul style="list-style-type: none"> • 2: fast channel with the load balancing function
member_type	String	Member type of the VPC channel, which can be: <ul style="list-style-type: none"> • ip (not supported currently) • instance This parameter is valid only when the VPC channel type is set to 2.
status	Integer	VPC channel status, which can be: <ul style="list-style-type: none"> • 1: normal • 2: abnormal
port	Integer	Host port of the VPC channel
balance_strategy	Integer	Distribution algorithm, which can be: <ul style="list-style-type: none"> • 1: WRR • 2: WLC • 3: SH • 4: URI hashing
create_time	Timestamp	Time when the VPC channel is created

Example response:

```
{
  "name": "vpc_001",
  "type": 2,
  "member_type": "instance",
  "port": 15565,
  "balance_strategy": 1,
  "id": "c3e6a7d85d9e47be89dfcc3cd37405d7",
  "create_time": "2018-07-27T12:30:48.027484Z",
  "status": 1
}
```

Status Codes

Table 4-463 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized

Status Code	Description
403	Forbidden
404	Not Found
500	Server Internal Error

4.17.3 Updating a VPC Channel

Function

This API is used to update the parameters of a specified VPC channel.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-464 HTTP/HTTPS request method and URI

Request Method	URI
PUT	/v1.0/apigw/vpc-channels/{id}

The following table lists the parameter in the URI.

Table 4-465 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	VPC channel ID

Request

Table 4-466 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	VPC channel name A VPC channel name consists of 3–64 characters, starting with a letter. Only letters, digits, hyphens (-), and underscores (_) are allowed.

Parameter	Mandatory	Type	Description
type	Yes	Integer	VPC channel type, which can be: <ul style="list-style-type: none"> • 2: fast channel with the load balancing function
member_type	Mandatory if type is 2	String	Member type of the VPC channel, which can be: <ul style="list-style-type: none"> • ip (not supported currently) • instance This parameter is valid only when the VPC channel type is set to 2 . The default value is instance .
port	Mandatory if type is 2	Integer	Host port of the VPC channel This parameter is valid only when the VPC channel type is set to 2 . The value range is 1–65535.
balance_strategy	Mandatory if type is 2	Integer	Distribution algorithm, which can be: <ul style="list-style-type: none"> • 1: WRR • 2: WLC • 3: SH • 4: URI hashing This parameter is valid only when the VPC channel type is set to 2 . The default value is 1 .
vpc_health_config	Mandatory if type is 2	Dictionary	Health check details. This parameter is valid only when the VPC channel type is set to 2 .
vpc_instances	Yes	Dictionary	Backend instance list. Only one backend instance is included if the VPC channel type is set to 1 .

Table 4-467 Health check details

Parameter	Mandatory	Type	Description
protocol	Yes	String	Protocol for performing health checks on cloud servers in the VPC channel. The value can be: <ul style="list-style-type: none"> • TCP • HTTP • HTTPS

Parameter	Mandatory	Type	Description
path	Required if protocol is set to http .	String	Destination path for health checks NOTE The value of this parameter must comply with URI specifications.
port	No	Integer	Destination port for health checks. By default, the host port of the VPC channel is used. Range: 1–65535
threshold_normal	Yes	Integer	Healthy threshold It refers to the number (x) of consecutive successful checks required for a cloud server to be marked as healthy. Range: 2–10
threshold_abnormal	Yes	Integer	Unhealthy threshold It refers to the number (x) of consecutive failed checks required for a cloud server to be marked as unhealthy. Range: 2–10
time_out	Yes	Integer	Timeout for determining whether a health check fails. Unit: s. The value must be less than the value of time_interval . Range: 2–30
time_interval	Yes	Integer	Interval between consecutive checks. Unit: s. The value must be greater than the value of time_out . Range: 5–300
http_code	Required if protocol is set to http .	String	HTTP response codes for determining a successful HTTP response The value can be any integer within 100–599 in one of the following formats: <ul style="list-style-type: none"> • Multiple values, for example, 200,201,202 • Range, for example, 200-299 • Multiple values and ranges, for example, 201,202,210-299

Table 4-468 Backend instance list

Parameter	Mandatory	Type	Description
instance_name	Yes	String	Backend instance name The name must contain 1–64 characters. Only letters, digits, periods (.), hyphens (-), and underscores (_) are allowed.
instance_id	Yes	String	Backend instance ID The ID must contain 1–64 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed.
weight	Mandatory if type is 2	Integer	Cloud server weight The larger the weight is, the more requests are forwarded to the backend instance. This parameter is valid only when the VPC channel type is set to 2. The value range is 1–100.

Example request:

```
{
  "balance_strategy": 1,
  "name": "vpc_001",
  "port": 15565,
  "type": 2,
  "member_type": "instance",
  "vpc_health_config": {
    "http_code": "205",
    "path": "/hc",
    "port": 15563,
    "protocol": "http",
    "threshold_abnormal": 5,
    "threshold_normal": 5,
    "time_interval": 200,
    "time_out": 30
  },
  "vpc_instances": [
    {
      "instance_id": "instance01",
      "instance_name": "instance_name01",
      "weight": 10
    }
  ]
}
```

Response

Table 4-469 Parameter description

Parameter	Type	Description
id	String	VPC channel ID

Parameter	Type	Description
name	String	VPC channel name
type	Integer	VPC channel type, which can be: <ul style="list-style-type: none"> • 2: fast channel with the load balancing function
member_type	String	Member type of the VPC channel, which can be: <ul style="list-style-type: none"> • ip (not supported currently) • instance This parameter is valid only when the VPC channel type is set to 2.
status	Integer	VPC channel status, which can be: <ul style="list-style-type: none"> • 1: normal • 2: abnormal
port	Integer	Host port of the VPC channel
balance_strategy	Integer	Distribution algorithm, which can be: <ul style="list-style-type: none"> • 1: WRR • 2: WLC • 3: SH • 4: URI hashing
create_time	Timestamp	Time when the VPC channel is created

Example response:

```
{
  "name": "vpc_001",
  "type": 2,
  "member_type": "instance",
  "port": 15565,
  "balance_strategy": 1,
  "id": "c3e6a7d85d9e47be89dfcc3cd37405d7",
  "create_time": "2018-07-27T12:30:48.027484Z",
  "status": 1
}
```

Status Codes

Table 4-470 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized

Status Code	Description
403	Forbidden
404	Not Found
500	Server Internal Error

4.17.4 Deleting a VPC Channel

Function

This API is used to delete a specified VPC channel.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-471 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/vpc-channels/{id}

The following table lists the parameter in the URI.

Table 4-472 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	VPC channel ID

Request

N/A

Response

N/A

Status Codes

Table 4-473 Status codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.17.5 Querying VPC Channel Details

Function

This API is used to query the details of a specified VPC channel.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-474 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/vpc-channels/{id}

The following table lists the parameter in the URI.

Table 4-475 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	VPC channel ID

Request

N/A

Response

Table 4-476 Parameter description

Parameter	Type	Description
id	String	VPC channel ID
name	String	VPC channel name
type	Integer	VPC channel type, which can be: <ul style="list-style-type: none"> • 2: fast channel with the load balancing function
member_type	String	Member type of the VPC channel, which can be: <ul style="list-style-type: none"> • ip (not supported currently) • instance
status	Integer	VPC channel status, which can be: <ul style="list-style-type: none"> • 1: normal • 2: abnormal
port	Integer	Host port of the VPC channel
balance_strategy	Integer	Distribution algorithm, which can be: <ul style="list-style-type: none"> • 1: WRR • 2: WLC • 3: SH • 4: URI hashing
create_time	Timestamp	Time when the VPC channel is created
vpc_health_config	Dictionary	Health check details
vpc_instances	Dictionary	Backend instance list

Table 4-477 Health check details

Parameter	Type	Description
id	String	Health check ID
vpc_id	String	VPC channel ID
protocol	String	Protocol for performing health checks on cloud servers in the VPC channel. The value can be: <ul style="list-style-type: none"> • TCP • HTTP • HTTPS

Parameter	Type	Description
path	String	Destination path for health checks NOTE The value of this parameter must comply with URI specifications.
port	Integer	Destination port for health checks. By default, the host port of the VPC channel is used. Range: 1–65535
threshold_normal	Integer	Healthy threshold It refers to the number (x) of consecutive successful checks required for a cloud server to be marked as healthy. Range: 2–10
threshold_abnormal	Integer	Unhealthy threshold It refers to the number (x) of consecutive failed checks required for a cloud server to be marked as unhealthy. Range: 2–10
time_out	Integer	Timeout for determining whether a health check fails. Unit: s. The value must be less than the value of time_interval . Range: 2–30
time_interval	Integer	Interval between consecutive checks. Unit: s. The value must be greater than the value of time_out . Range: 5–300
http_code	String	HTTP response codes for determining a successful HTTP response The value can be any integer within 100–599 in one of the following formats: <ul style="list-style-type: none"> • Multiple values, for example, 200,201,202 • Range, for example, 200-299 • Multiple values and ranges, for example, 201,202,210-299
create_time	Timestamp	Time when the VPC channel is created

Table 4-478 Backend instance details

Parameter	Type	Description
id	String	Backend instance object ID
vpc_id	String	VPC channel ID

Parameter	Type	Description
status	Integer	Status of the backend instance object
instance_name	String	Backend instance name
instance_id	String	Backend instance ID
host	String	IP address of the backend instance
weight	Integer	Cloud server weight The larger the weight is, the more requests are forwarded to the backend instance. Range: 1–100
create_time	Timestamp	Time when the backend instance is added to the VPC channel

Example response:

```
{
  "name": "vpc_001",
  "type": 2,
  "member_type": "instance",
  "port": 15565,
  "balance_strategy": 1,
  "id": "c3e6a7d85d9e47be89dfcc3cd37405d7",
  "create_time": "2018-07-27T12:30:48Z",
  "status": 1,
  "vpc_health_config": {
    "protocol": "http",
    "path": "/hc",
    "port": 15563,
    "threshold_normal": 5,
    "threshold_abnormal": 5,
    "time_out": 30,
    "time_interval": 200,
    "http_code": "205",
    "id": "f26c1b158f2e40f2b531cf5c1b5e05e5",
    "vpc_id": "c3e6a7d85d9e47be89dfcc3cd37405d7",
    "create_time": "2018-07-27T12:30:48Z"
  },
  "vpc_instances": [
    {
      "instance_id": "instance01",
      "instance_name": "instance_name01",
      "host": "127.0.0.1",
      "weight": 10,
      "id": "c3bc73605a8b400793363c87574fbad7",
      "vpc_id": "c3e6a7d85d9e47be89dfcc3cd37405d7",
      "status": 1,
      "create_time": "2018-07-27T12:30:48Z"
    }
  ]
}
```

Status Codes

Table 4-479 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.17.6 Querying the VPC channel List

Function

This API is used to query the list of VPC channels that have been created.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-480 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/vpc-channels[?page_size, page_no, id, name, vpc_type]

o

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **id**, **name**, **vpc_type**, **page_size**, and **page_no**.

Table 4-481 Parameter description

Parameter	Mandatory	Type	Description
id	No	String	VPC channel ID

Parameter	Mandatory	Type	Description
name	No	String	VPC channel name
vpc_type	No	Integer	VPC channel type, which can be:
page_size	No	Integer	Number of VPC channels displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .
precise_search	No	String	Parameter name (name) for exact matching

Request

N/A

Response

Table 4-482 Parameter description

Parameter	Type	Description
total	Integer	Total number of VPC channels that match the query conditions
size	Integer	Length of the returned VPC channel list
vpcs	Dictionary	VPC channel list

Table 4-483 VPC channel parameter description

Parameter	Type	Description
id	String	VPC channel ID
name	String	VPC channel name
type	Integer	VPC channel type, which can be: <ul style="list-style-type: none"> 2: fast channel with the load balancing function

Parameter	Type	Description
member_type	String	Member type of the VPC channel, which can be: <ul style="list-style-type: none">ip (not supported currently)instance
status	Integer	VPC channel status, which can be: <ul style="list-style-type: none">1: normal2: abnormal
port	Integer	Host port of the VPC channel
balance_strategy	Integer	Distribution algorithm, which can be: <ul style="list-style-type: none">1: WRR2: WLC3: SH4: URI hashing
create_time	Timestamp	Time when the VPC channel is created

Example response:

```
{
  "total": 2,
  "size": 2,
  "vpcs": [
    {
      "name": "Channel_1",
      "type": 1,
      "member_type": "instance",
      "port": 8080,
      "balance_strategy": 1,
      "id": "39c62689302a48fe9f4bd7cf5c052064",
      "create_time": "2018-04-24T12:07:58Z",
      "status": 1
    },
    {
      "name": "Channel_2",
      "type": 2,
      "member_type": "instance",
      "port": 8088,
      "balance_strategy": 1,
      "id": "e6831cbcbe2b45bbbc6318c2892f060b",
      "create_time": "2018-04-24T11:57:03Z",
      "status": 1
    }
  ]
}
```

Status Codes

Table 4-484 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.17.7 Adding Backend Instances (Cloud Servers)

Function

This API is used to add cloud servers to a specified VPC channel.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-485 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/vpc-channels/{id}/members

The following table lists the parameter in the URI.

Table 4-486 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	VPC channel ID

Request

Table 4-487 Parameter description

Parameter	Mandatory	Type	Description
vpc_instances	Yes	Dictionary	Backend instance list

Table 4-488 Backend instance details

Parameter	Mandatory	Type	Description
instance_name	Yes	String	Cloud server name The name must contain 1–64 characters. Only letters, digits, periods (.), hyphens (-), and underscores (_) are allowed.
instance_id	Yes	String	Cloud server ID The ID must contain 1–64 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed.
weight	Yes	Integer	Cloud server weight The larger the weight is, the more requests are forwarded to the cloud server. Range: 1–100

Example request:

```
{
  "vpc_instances": [
    {
      "instance_id": "instance02",
      "instance_name": "instance_name02",
      "weight": 10
    }
  ]
}
```

Response

Table 4-489 Parameter description

Parameter	Type	Description
total	Integer	Total number of cloud servers under the VPC channel

Parameter	Type	Description
size	Integer	Total number of cloud servers returned
vpc_instances	Dictionary	Cloud server list

Table 4-490 Backend instance details

Parameter	Type	Description
id	String	Backend instance object ID
vpc_id	String	VPC channel ID
status	Integer	Status of the backend instance object
instance_name	String	Cloud server name
instance_id	String	Cloud server ID
host	String	Cloud server IP address
weight	Integer	Cloud server weight The larger the weight is, the more requests are forwarded to the cloud server. Range: 1–100
create_time	Timestamp	Time when the cloud server is added to the VPC channel

Example response:

```
{
  "total": 2,
  "size": 2,
  "vpc_instances": [
    {
      "instance_id": "instance02",
      "instance_name": "instance_name02",
      "host": "127.0.0.2",
      "weight": 10,
      "id": "680e42fab429447ca23b9623107523d9",
      "vpc_id": "c3e6a7d85d9e47be89dfcc3cd37405d7",
      "status": 1,
      "create_time": "2018-07-27T12:42:32Z"
    },
    {
      "instance_id": "instance01",
      "instance_name": "instance_name01",
      "host": "127.0.0.1",
      "weight": 10,
      "id": "c3bc73605a8b400793363c87574fbad7",
      "vpc_id": "c3e6a7d85d9e47be89dfcc3cd37405d7",
      "status": 1,
      "create_time": "2018-07-27T12:30:48Z"
    }
  ]
}
```

```
}
]
}
```

Status Codes

Table 4-491 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.17.8 Deleting a Backend Instance (Cloud Server)

Function

This API is used to delete a cloud server of a specified VPC channel.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-492 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/vpc-channels/{id}/members/{inst_id}

The following table lists the parameters in the URI.

Table 4-493 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	VPC channel ID
inst_id	Yes	String	Backend instance object ID

Request

N/A

Response

N/A

Status Codes

Table 4-494 Status codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.17.9 Querying the Backend Instance List (Cloud Server List)

Function

This API is used to query the cloud servers of a specified VPC channel.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-495 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/vpc-channels/{id}/members[?page_size, page_no, name]

NOTE

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **name**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-496 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	VPC channel ID
name	No	String	Cloud server name
page_size	No	Integer	Number of cloud servers displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .

Request

N/A

Response

Table 4-497 Parameter description

Parameter	Type	Description
total	Integer	Total number of cloud servers that match the query conditions
size	Integer	Length of the returned cloud server list
vpc_instances	Dictionary	Cloud server list

Table 4-498 Backend instance details

Parameter	Type	Description
id	String	Backend instance object ID
vpc_id	String	VPC channel ID
status	Integer	Status of the backend instance object
instance_name	String	Cloud server name
instance_id	String	Cloud server ID
host	String	Cloud server IP address

Parameter	Type	Description
weight	Integer	Cloud server weight The larger the weight is, the more requests are forwarded to the cloud server. Range: 1–100
create_time	Timestamp	Time when the cloud server is added to the VPC channel

Example response:

```
{
  "total": 2,
  "size": 2,
  "vpc_instances": [
    {
      "instance_id": "instance02",
      "instance_name": "instance_name02",
      "host": "127.0.0.2",
      "weight": 10,
      "id": "680e42fab429447ca23b9623107523d9",
      "vpc_id": "c3e6a7d85d9e47be89dfcc3cd37405d7",
      "status": 1,
      "create_time": "2018-07-27T12:42:32Z"
    },
    {
      "instance_id": "instance01",
      "instance_name": "instance_name01",
      "host": "127.0.0.1",
      "weight": 10,
      "id": "c3bc73605a8b400793363c87574fbad7",
      "vpc_id": "c3e6a7d85d9e47be89dfcc3cd37405d7",
      "status": 1,
      "create_time": "2018-07-27T12:30:48Z"
    }
  ]
}
```

Status Codes

Table 4-499 Status codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	Server Internal Error

4.18 OpenAPI

4.18.1 Exporting All APIs in an API Group

Function

This API is used to export definitions of APIs in a specified API group.

The basic, full, or extended Swagger definitions of APIs belonging to the API group and published in a specified environment will be imported.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-500 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/openapi? env_id={0}&group_id={1}&define={2}&version={3}&type={4}

Request

Table 4-501 Parameter description

Parameter	Mandatory	Type	Description
env_id/env	Yes	String	ID of the environment where APIs in a specified group have been published. Both env_id (recommended) and env can indicate an environment ID. If the two parameters are available, the value of env_id takes the precedence.
group_id/group	Yes	String	API group ID. Both group_id (recommended) and group can indicate a group ID. If the two parameters are available, the value of group_id takes the precedence.

Parameter	Mandatory	Type	Description
define	No	String	Definition scope of the APIs to be exported: <ul style="list-style-type: none"> • base: basic definition • full: full definition • all: extended definition The default value is base .
version	No	String	Version of the APIs after exporting. The default value is the current date and time.
type	No	String	Format for exporting API definitions. The value can be json or yaml . The default value is json .

Response

Table 4-502 Parameter description

Parameter	Mandatory	Type	Description
swagger	Yes	String	The value is fixed at 2.0 .
info	Yes	Object	See Table 4-503 .
host	Yes	String	Subdomain name bound to the API group
paths	Yes	Object	See Table 4-504 .
responses	Yes	Object	Common response, which can be referenced in {method} . For details, see Table 4-508 .
securityDefinitions	Yes	Object	Security authentication mode definition. For details, see Table 4-512 .
x-apigateway-access-controls	No	Object	Access control information. For details, see Table 4-521 .
x-apigateway-ratelimits	No	Object	Request throttling information. For details, see Table 4-523 .

Table 4-503 Parameter description of info

Parameter	Mandatory	Type	Description
title	Yes	String	API group name
version	Yes	String	Version number. You can specify a version number or use the current date and time by default.
description	No	String	Description of the API group

Table 4-504 Parameter description of paths

Parameter	Mandatory	Type	Description
uri	Yes	Object	API access address. For details, see Table 4-505 .

Table 4-505 Parameter description of uri

Parameter	Mandatory	Type	Description
method	Yes	Object	API access method. For details, see Table 4-506 .

Table 4-506 Parameter description of method

Parameter	Mandatory	Type	Description
operationId	Yes	String	API name
description	No	String	API description
schemes	Yes	Object	API request protocol. HTTP and HTTPS are supported.
tags	No	Object	API tags
parameters	No	Object	Request parameter definitions. For details, see Table 4-507 .
responses	Yes	Object	Response definition. For details, see Table 4-508 .
security	No	Object	Security authentication mode. For details, see Table 4-509 .

Parameter	Mandatory	Type	Description
x-apigateway-access-control	No	Object	Access control policy bound to the API
x-apigateway-backend	No	Object	Backend information. For details, see Table 4-514 .
x-apigateway-backend-policies	No	Object	Backend policy information. For details, see Table 4-515 .
x-apigateway-cors	No	Boolean	Indicates whether CORS is supported.
x-apigateway-match-mode	No	String	Route matching mode
x-apigateway-ratelimit	No	String	Name of the request throttling policy bound to the API
x-apigateway-request-type	No	String	API type

Table 4-507 Frontend parameter description

Parameter	Mandatory	Type	Description
maximum	No	Float	Maximum value of a number type parameter
minimum	No	Float	Minimum value of a number type parameter
maxLength	No	Integer	Maximum length of a string type parameter
minLength	No	Integer	Minimum length of a string type parameter
pattern	No	String	Regular expression of the parameter value
type	No	String	Parameter type
default	No	String	Default value
description	No	String	Parameter description
name	No	String	Parameter name
in	No	String	Parameter location, which can be path , header , query , formData , or body

Parameter	Mandatory	Type	Description
required	No	Boolean	Indicates whether the parameter is required. The parameter is required when its location is path .

Table 4-508 Parameter description of responses

Parameter	Mandatory	Type	Description
default	No	Object	Default response, which will be used when no status codes are defined
status_code	No	Object	Response status code. For details, see Table 4-510 .
x-apigateway-result-failure-sample	No	String	Example response for a failed request
x-apigateway-result-normal-sample	No	String	Example response for a successful request

Table 4-509 Parameter description of security

Parameter	Mandatory	Type	Description
apig-auth-type	No	Object	Security authentication mode. This parameter is a null array. Options: <ul style="list-style-type: none"> • apig-auth-app: App authentication • apig-auth-iam: IAM authentication • Null: No authentication required

Table 4-510 Parameter description of status_code

Parameter	Mandatory	Type	Description
description	No	String	Response description
schema	No	Object	Response body. For details, see Table 4-511 .

Table 4-511 Parameter description of schema

Parameter	Mandatory	Type	Description
description	No	String	Response body
type	No	String	Body type, which can be FORM or STREAM

Table 4-512 Parameter description of securityDefinitions

Parameter	Mandatory	Type	Description
name	Yes	Object	Custom authorizer. For details, see Table 4-513 .

Table 4-513 Parameter description of name

Parameter	Mandatory	Type	Description
type	Yes	String	Authentication type. apiKey is supported.
name	Yes	String	Name of apiKey
in	Yes	String	Location of apiKey
x-apigateway-auth-type	Yes	String	Authentication type extended based on apiKey. Authentication types AppSigv1, IAM, and IAM_NONE are supported.

Table 4-514 Parameter description of x-apigateway-backend

Parameter	Mandatory	Type	Description
type	Yes	String	Backend type. The options include HTTP , HTTP-VPC , FUNCTION , and MOCK .
parameters	No	Object	Backend parameters. For details, see Table 4-516 .

Parameter	Mandatory	Type	Description
backend_definition	Yes	Object	Backend definition The following backend definitions are supported: <ul style="list-style-type: none"> • httpEndpoints: See Table 4-517. • httpVpcEndpoints: See Table 4-518. • mockEndpoints: See Table 4-519.

Table 4-515 Parameter description of x-apigateway-backend-policies

Parameter	Mandatory	Type	Description
type	Yes	String	Backend type. The options include HTTP , HTTP-VPC , FUNCTION , and MOCK .
name	Yes	String	Backend policy name
parameters	No	Object	Backend parameters. For details, see Table 4-516 .
backend_definition	Yes	Object	Backend definition The following backend definitions are supported: <ul style="list-style-type: none"> • httpEndpoints: See Table 4-517. • httpVpcEndpoints: See Table 4-518. • mockEndpoints: See Table 4-519.
conditions	Yes	Object	Policy conditions. For details, see Table 4-520 .
effectMode	Yes	String	Effective mode of the backend policy. The options include ANY and ALL .

Table 4-516 Backend parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name, which consists of a maximum of 32 bytes, starting with a letter. Only letters, digits, periods (.), hyphens (-), and underscores (_) are allowed. The names of header parameters are not case-sensitive.

Parameter	Mandatory	Type	Description
value	Yes	String	Parameter value, which is a parameter name if the parameter comes from a request
in	Yes	String	Parameter location, which can be header , query , or path
origin	Yes	String	Parameter mapping source. The options include REQUEST and CONSTANT .
description	No	String	Parameter meaning

Table 4-517 Parameter description of backend httpEndpoints

Parameter	Mandatory	Type	Description
address	Yes	String	Backend service address. The format is <i><Domain name or IP address>:[Port number]</i>
scheme	Yes	String	Backend request protocol. HTTP and HTTPS are supported.
method	Yes	String	Backend request method. The options include GET , POST , PUT , DELETE , HEAD , OPTIONS , PATCH , and ANY .
path	Yes	String	Backend request path, which can contain variables.
timeout	No	Integer	Backend request timeout in milliseconds. The value ranges from 1 to 60,000, and the default value is 5000 .
description	No	String	Backend description

Table 4-518 Parameter description of backend httpVpcEndpoints

Parameter	Mandatory	Type	Description
name	Yes	Array	VPC channel name
scheme	Yes	String	Backend request protocol. HTTP and HTTPS are supported.

Parameter	Mandatory	Type	Description
method	Yes	String	Backend request method. The options include GET , POST , PUT , DELETE , HEAD , OPTIONS , PATCH , and ANY .
path	Yes	String	Backend request path, which can contain variables.
timeout	No	Integer	Backend request timeout in milliseconds. The value ranges from 1 to 60,000, and the default value is 5000 .
host	No	String	VPC channel proxy host
description	No	String	Backend description

Table 4-519 Parameter description of backend mockEndpoints

Parameter	Mandatory	Type	Description
result-content	Yes	String	Mock response
description	No	String	Backend description

Table 4-520 Parameter description of conditions

Parameter	Mandatory	Type	Description
type	Yes	String	Policy condition type. The options include equal , enum , and pattern .
value	Yes	String	Policy condition value
origin	Yes	String	Policy condition source. The options include source and request .
parameter	No	String	Input parameter name if the origin parameter is set to request .

Table 4-521 Parameter description of x-apigateway-access-controls

Parameter	Mandatory	Type	Description
acl_name	No	Object	Access control policy. For details, see Table 4-522 .

Table 4-522 Parameter description of `acl_name`

Parameter	Mandatory	Type	Description
<code>acl-type</code>	Yes	String	Access control effect. The options include PERMIT and DENY .
<code>entity-type</code>	Yes	String	Access control object. Only IP addresses and accounts are supported.
<code>value</code>	Yes	String	Access control values, which are separated with commas (,).

Table 4-523 Parameter description of `x-apigateway-ratelimits`

Parameter	Mandatory	Type	Description
<code>throttle_name</code>	No	Object	Request throttling policy. For details, see Table 4-524 .

Table 4-524 Parameter description of `throttle_name`

Parameter	Mandatory	Type	Description
<code>api-limit</code>	Yes	Integer	Maximum number of times an API can be called
<code>user-limit</code>	No	Integer	Number of times the API can be called by a user
<code>app-limit</code>	No	Integer	Number of times the API can be called by an app
<code>ip-limit</code>	No	Integer	Number of times the API can be called by an IP address
<code>interval</code>	Yes	Integer	Throttling period
<code>unit</code>	Yes	String	Throttling unit, which can be SECOND , MINUTE , HOUR , or DAY
<code>shared</code>	No	Boolean	Whether to share the throttling limits among APIs
<code>special</code>	No	Object	Excluded request throttling configurations. For details, see Table 4-525 .

Table 4-525 Parameter description of special

Parameter	Mandatory	Type	Description
type	Yes	String	Excluded request throttling type, which can be APP or USER
limit	Yes	Integer	Access limit
instance	Yes	String	Excluded app or user

Example response:

```
{
  "swagger": "2.0",
  "info": {
    "description": "api group test",
    "title": "APIGroup_test",
    "version": "2019-09-12-17:38:10"
  },
  "host": "6b075335476a4943bf70c3db1343c912.apigw.example.com",
  "paths": {
    "/test/{path}": {
      "get": {
        "security": [
          {
            "apig-auth-app": []
          }
        ],
        "description": "api test",
        "schemes": [
          "https"
        ],
        "operationId": "API_test",
        "parameters": [
          {
            "type": "string",
            "description": "header parameter",
            "name": "header",
            "in": "header",
            "required": true
          },
          {
            "type": "string",
            "description": "path parameter",
            "name": "path",
            "in": "path",
            "required": true
          },
          {
            "type": "number",
            "default": "123",
            "description": "query parameter",
            "name": "query",
            "in": "query"
          }
        ],
        "responses": {
          "default": {
            "$ref": "#/responses/default"
          },
          "x-apigateway-result-failure-sample": "",
          "x-apigateway-result-normal-sample": "success"
        }
      }
    }
  }
}
```

```
"x-apigateway-backend": {
  "httpEndpoints": {
    "address": "1.1.1.1:443",
    "description": "",
    "method": "GET",
    "path": "/test/{path}",
    "scheme": "https",
    "timeout": 5000
  },
  "parameters": [
    {
      "description": "",
      "in": "HEADER",
      "name": "header",
      "origin": "REQUEST",
      "value": "header"
    },
    {
      "description": "",
      "in": "PATH",
      "name": "path",
      "origin": "REQUEST",
      "value": "path"
    },
    {
      "description": "",
      "in": "QUERY",
      "name": "query",
      "origin": "REQUEST",
      "value": "query"
    }
  ],
  "type": "HTTP"
},
"x-apigateway-backend-policies": [
  {
    "conditions": [
      {
        "origin": "param",
        "parameter": "path",
        "type": "exact",
        "value": "path"
      },
      {
        "origin": "source",
        "parameter": "",
        "type": "",
        "value": "1.0.0.0/8"
      }
    ],
    "effectMode": "ANY",
    "httpVpcEndpoints": {
      "method": "POST",
      "name": "VPC_n9ct",
      "path": "/",
      "scheme": "HTTPS",
      "timeout": 5000
    },
    "name": "policy_test",
    "type": "HTTP-VPC"
  }
],
"x-apigateway-cors": false,
"x-apigateway-match-mode": "NORMAL",
"x-apigateway-request-type": "public"
}
},
"responses": {
```

```

"default": {
  "description": "response example"
},
"securityDefinitions": {
  "apig-auth-app": {
    "type": "apiKey",
    "name": "Authorization",
    "in": "header",
    "x-apigateway-auth-type": "AppSigv1"
  },
  "apig-auth-iam": {
    "type": "apiKey",
    "name": "unused",
    "in": "header",
    "x-apigateway-auth-type": "IAM"
  }
}
}

```

Status Codes

Table 4-526 Status codes

Status Code	Description
200	OK
400	bad request
401	unauthorized
403	forbidden
500	server internal error

4.18.2 Exporting Multiple APIs

Function

This API is used to export the basic, full, or extended Swagger definition of specified APIs by their IDs.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-527

Request Method	URI
POST	/v1.0/apigw/openapi/apis? env_id={0}&define={2}&version={3}&type={4}

The following table lists the parameter in the URI.

Table 4-528 Parameter description

Parameter	Mandatory	Type	Description
env_id/env	Yes	String	ID of the environment where APIs in a specified group have been published. Both env_id (recommended) and env can indicate an environment ID. If the two parameters are available, the value of env_id takes the precedence.
define	No	String	Definition scope of the APIs to be exported: <ul style="list-style-type: none"> • base: basic definition • full: full definition • all: extended definition The default value is base .
version	No	String	Version of the APIs after exporting. The default value is the current date and time.
type	No	String	Format for exporting API definitions. The value can be json or yaml . The default value is json .

Request

Table 4-529 Parameter description

Location	Mandatory	Type	Description
body	Yes	String Array	IDs of the APIs to be exported

Example request:

```
["81efcfd94b8747a0b21e8c04144a4e8c","7addcd00cfab433984b1d8bf2fe08aaa"]
```

Response

Table 4-530 Parameter description

Parameter	Mandatory	Type	Description
swagger	Yes	String	The value is fixed at 2.0 .
info	Yes	Object	For details, see Table 4-531 .
host	Yes	String	Subdomain name bound to the API group
paths	Yes	Object	See Table 4-532 .
responses	Yes	Object	Common response, which can be referenced in {method} . For details, see Table 4-536 .
securityDefinitions	Yes	Object	Security authentication mode definition. For details, see Table 4-540 .
x-apigateway-access-controls	No	Object	Access control information. For details, see Table 4-549 .
x-apigateway-ratelimits	No	Object	Request throttling information. For details, see Table 4-551 .

Table 4-531 Parameter description of info

Parameter	Mandatory	Type	Description
title	Yes	String	API group name
version	Yes	String	Version number. You can specify a version number or use the current date and time by default.
description	No	String	Description of the API group

Table 4-532 Parameter description of paths

Parameter	Mandatory	Type	Description
uri	Yes	Object	API access address. For details, see Table 4-533 .

Table 4-533 Parameter description of uri

Parameter	Mandatory	Type	Description
method	Yes	Object	API access method. For details, see Table 4-534 .

Table 4-534 Parameter description of method

Parameter	Mandatory	Type	Description
operationId	Yes	String	API name
description	No	String	API description
schemes	Yes	Object	API request protocol. HTTP and HTTPS are supported.
tags	No	Object	API tags
parameters	No	Object	Request parameter definitions. For details, see Table 4-535 .
responses	Yes	Object	Response definition. For details, see Table 4-536 .
security	No	Object	Security authentication mode. For details, see Table 4-537 .
x-apigateway-access-control	No	Object	Access control policy bound to the API
x-apigateway-backend	No	Object	Backend information. For details, see Table 4-542 .
x-apigateway-backend-policies	No	Object	Backend policy information. For details, see Table 4-543 .
x-apigateway-cors	No	Boolean	Indicates whether CORS is supported.
x-apigateway-match-mode	No	String	Route matching mode
x-apigateway-ratelimit	No	String	Name of the request throttling policy bound to the API
x-apigateway-request-type	No	String	API type

Table 4-535 Frontend parameter description

Parameter	Mandatory	Type	Description
maximum	No	Float	Maximum value of a number type parameter
minimum	No	Float	Minimum value of a number type parameter
maxLength	No	Integer	Maximum length of a string type parameter
minLength	No	Integer	Minimum length of a string type parameter
pattern	No	String	Regular expression of the parameter value
type	No	String	Type
default	No	String	Default value
description	No	String	Parameter description
name	No	String	Parameter name
in	No	String	Parameter location, which can be path , header , query , formData , or body
required	No	Boolean	Whether the parameter is required. The parameter is required when its location is path .

Table 4-536 Parameter description of responses

Parameter	Mandatory	Type	Description
default	No	Object	Default response, which will be used when no status codes are defined
status_code	No	Object	Response status code. The value is a response object. For details, see Table 4-538 .
x-apigateway-result-failure-sample	No	String	Example response for a failed request
x-apigateway-result-normal-sample	No	String	Example response for a successful request

Table 4-537 Parameter description of security

Parameter	Mandatory	Type	Description
apig-auth-type	No	Object	Security authentication mode. This parameter is a null array. Options: <ul style="list-style-type: none"> • apig-auth-app: App authentication • apig-auth-iam: IAM authentication • Null: No authentication required

Table 4-538 Parameter description of status code

Parameter	Mandatory	Type	Description
description	No	String	Response description
schema	No	Object	Response body. For details, see Table 4-539 .

Table 4-539 Parameter description of schema

Parameter	Mandatory	Type	Description
description	No	String	Body description
type	No	String	Body type, which can be FORM or STREAM

Table 4-540 Parameter description of securityDefinitions

Parameter	Mandatory	Type	Description
name	Yes	Object	Security authentication mode. For details, see Table 4-541 .

Table 4-541 Parameter description of name

Parameter	Mandatory	Type	Description
type	Yes	String	Authentication type. apiKey is supported.

Parameter	Mandatory	Type	Description
name	Yes	String	Name of apiKey
in	Yes	String	Location of apiKey
x-apigateway-auth-type	Yes	String	Authentication type extended based on apiKey. Authentication types AppSigv1, IAM, and IAM_NONE are supported.

Table 4-542 Parameter description of x-apigateway-backend

Parameter	Mandatory	Type	Description
type	Yes	String	Backend type. The options include HTTP , HTTP-VPC , and MOCK .
parameters	No	Object	Backend parameters. For details, see Table 4-544 .
backend_definition	Yes	Object	Backend definition The following backend definitions are supported: <ul style="list-style-type: none"> • httpEndpoints: See Table 4-545. • httpVpcEndpoints: See Table 4-546. • mockEndpoints: See Table 4-547.

Table 4-543 Parameter description of x-apigateway-backend-policies

Parameter	Mandatory	Type	Description
type	Yes	String	Backend type. The options include HTTP , HTTP-VPC , and MOCK .
name	Yes	String	Backend policy name
parameters	No	Object	Backend parameters. For details, see Table 4-544 .
backend_definition	Yes	Object	Backend definition The following backend definitions are supported: <ul style="list-style-type: none"> • httpEndpoints: See Table 4-545. • httpVpcEndpoints: See Table 4-546. • mockEndpoints: See Table 4-547.

Parameter	Mandatory	Type	Description
conditions	Yes	Object	Policy conditions. For details, see Table 4-548 .
effectMode	Yes	String	Effective mode of the backend policy. The options include ANY and ALL .

Table 4-544 Backend parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name, which consists of a maximum of 32 bytes, starting with a letter. Only letters, digits, periods (.), hyphens (-), and underscores (_) are allowed. The names of header parameters are not case-sensitive.
value	Yes	String	Parameter value, which is a parameter name if the parameter comes from a request
in	Yes	String	Parameter location, which can be header , query , or path
origin	Yes	String	Parameter mapping source. The options include REQUEST and CONSTANT .
description	No	String	Parameter meaning

Table 4-545 Parameter description of backend httpEndpoints

Parameter	Mandatory	Type	Description
address	Yes	String	Backend service address. The format is <i><Domain name or IP address>.[Port number]</i>
scheme	Yes	String	Backend request protocol. HTTP and HTTPS are supported.
method	Yes	String	Backend request method. The options include GET , POST , PUT , DELETE , HEAD , OPTIONS , PATCH , and ANY .

Parameter	Mandatory	Type	Description
path	Yes	String	Backend request path, which can contain variables.
timeout	No	Integer	Backend request timeout in milliseconds. The value ranges from 1 to 60,000, and the default value is 5000 .
description	No	String	Backend description

Table 4-546 Parameter description of backend httpVpcEndpoints

Parameter	Mandatory	Type	Description
name	Yes	Array	VPC channel name
scheme	Yes	String	Backend request protocol. HTTP and HTTPS are supported.
method	Yes	String	Backend request method. The options include GET, POST, PUT, DELETE, HEAD, OPTIONS, PATCH, and ANY .
path	Yes	String	Backend request path, which can contain variables.
timeout	No	Integer	Backend request timeout in milliseconds. The value ranges from 1 to 60,000, and the default value is 5000 .
host	No	String	VPC channel proxy host
description	No	String	Backend description

Table 4-547 Parameter description of backend mockEndpoints

Parameter	Mandatory	Type	Description
result-content	Yes	String	Mock response
description	No	String	Backend description

Table 4-548 Parameter description of conditions

Parameter	Mandatory	Type	Description
type	Yes	String	Policy condition type. The options include equal , enum , and pattern .
value	Yes	String	Policy condition value
origin	Yes	String	Policy condition source. The options include source and request .
parameter	No	String	Input parameter name if the origin parameter is set to request .

Table 4-549 Parameter description of x-apigateway-access-controls

Parameter	Mandatory	Type	Description
acl_name	No	Object	Access control policy. For details, see Table 4-550 .

Table 4-550 Parameter description of acl_name

Parameter	Mandatory	Type	Description
acl-type	Yes	String	Access control effect. The options include PERMIT and DENY .
entity-type	Yes	String	Access control object. Only IP addresses and accounts are supported.
value	Yes	String	Access control values, which are separated with commas (,).

Table 4-551 Parameter description of x-apigateway-ratelimits

Parameter	Mandatory	Type	Description
throttle_name	No	Object	Request throttling policy. For details, see Table 4-552 .

Table 4-552 Parameter description of throttle_name

Parameter	Mandatory	Type	Description
api-limit	Yes	Integer	Maximum number of times an API can be called
user-limit	No	Integer	Number of times the API can be called by a user
app-limit	No	Integer	Number of times the API can be called by an app
ip-limit	No	Integer	Number of times the API can be called by an IP address
interval	Yes	Integer	Throttling period
unit	Yes	String	Throttling unit, which can be SECOND , MINUTE , HOURL , or DAY
shared	No	Boolean	Whether to share the throttling limits among APIs
special	No	Object	Excluded request throttling configurations. For details, see Table 4-553 .

Table 4-553 Parameter description of special

Parameter	Mandatory	Type	Description
type	Yes	String	Excluded request throttling type, which can be APP or USER
limit	Yes	Integer	Access limit
instance	Yes	String	Excluded app or user

Example response:

```
{
  "swagger": "2.0",
  "info": {
    "description": "api group test",
    "title": "APIGroup_test",
    "version": "2019-09-12-17:38:10"
  },
  "host": "6b075335476a4943bf70c3db1343c912.apigw.example.com",
  "paths": {
    "/test/{path}": {
      "get": {
        "security": [
          {
            "apig-auth-app": []
          }
        ]
      }
    }
  }
}
```



```
],
  "description": "api test",
  "schemes": [
    "https"
  ],
  "operationId": "API_test",
  "parameters": [
    {
      "type": "string",
      "description": "header parameter",
      "name": "header",
      "in": "header",
      "required": true
    },
    {
      "type": "string",
      "description": "path parameter",
      "name": "path",
      "in": "path",
      "required": true
    },
    {
      "type": "number",
      "default": "123",
      "description": "query parameter",
      "name": "query",
      "in": "query"
    }
  ],
  "responses": {
    "default": {
      "$ref": "#/responses/default"
    },
    "x-apigateway-result-failure-sample": "",
    "x-apigateway-result-normal-sample": "success"
  },
  "x-apigateway-backend": {
    "httpEndpoints": {
      "address": "1.1.1.1:443",
      "description": "",
      "method": "GET",
      "path": "/test/{path}",
      "scheme": "https",
      "timeout": 5000
    }
  },
  "parameters": [
    {
      "description": "",
      "in": "HEADER",
      "name": "header",
      "origin": "REQUEST",
      "value": "header"
    },
    {
      "description": "",
      "in": "PATH",
      "name": "path",
      "origin": "REQUEST",
      "value": "path"
    },
    {
      "description": "",
      "in": "QUERY",
      "name": "query",
      "origin": "REQUEST",
      "value": "query"
    }
  ],
  "type": "HTTP"
}
```

```

    },
    "x-apigateway-backend-policies": [
      {
        "conditions": [
          {
            "origin": "param",
            "parameter": "path",
            "type": "exact",
            "value": "path"
          },
          {
            "origin": "source",
            "parameter": "",
            "type": "",
            "value": "1.0.0.0/8"
          }
        ],
        "effectMode": "ANY",
        "httpVpcEndpoints": {
          "method": "POST",
          "name": "VPC_n9ct",
          "path": "/",
          "scheme": "HTTPS",
          "timeout": 5000
        },
        "name": "policy_test",
        "type": "HTTP-VPC"
      }
    ],
    "x-apigateway-cors": false,
    "x-apigateway-match-mode": "NORMAL",
    "x-apigateway-request-type": "public"
  }
},
"responses": {
  "default": {
    "description": "response example"
  }
},
"securityDefinitions": {
  "apig-auth-app": {
    "type": "apiKey",
    "name": "Authorization",
    "in": "header",
    "x-apigateway-auth-type": "AppSigv1"
  },
  "apig-auth-iam": {
    "type": "apiKey",
    "name": "unused",
    "in": "header",
    "x-apigateway-auth-type": "IAM"
  }
}
}

```

Status Codes

Table 4-554 Status codes

Status Code	Description
200	OK
400	bad request

Status Code	Description
401	unauthorized
403	forbidden
500	server internal error

4.18.3 Importing APIs to a New API Group

Function

This API is used to import Swagger APIs to a new API group. Swagger files in JSON or YAML format are supported.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-555

Request Method	URI
POST	/v1.0/apigw/openapi

The following table lists the parameter in the URI.

Table 4-556 Parameter description

Parameter	Location	Mandatory	Type	Description
extend_mode	query	No	String	Extended definition import mode. The options include merge and override . If the extended definition conflicts with existing API definition, you can choose to retain or override the existing definition.

Request

Table 4-557 Parameter description

Parameter	Mandatory	Type	Description
swagger	Yes	String	The value is fixed at 2.0 .
info	Yes	Object	See Table 4-558 .
paths	Yes	Object	See Table 4-559 .
responses	No	Object	Common response, which can be referenced in {method} . For details, see Table 4-563 .
securityDefinitions	Yes	Object	Security authentication mode definition. For details, see Table 4-567 .
x-apigateway-access-controls	No	Object	Access control information. For details, see Table 4-576 .
x-apigateway-ratelimits	No	Object	Request throttling information. For details, see Table 4-578 .

Table 4-558 Parameter description of info

Parameter	Mandatory	Type	Description
title	Yes	String	API group name
version	No	String	Version number. You can specify a version number or use the current date and time by default.
description	No	String	Description of the API group

Table 4-559 Parameter description of paths

Parameter	Mandatory	Type	Description
uri	Yes	Object	API access address. For details, see Table 4-560 .

Table 4-560 Parameter description of uri

Parameter	Mandatory	Type	Description
method	Yes	Object	API access method. For details, see Table 4-561 .

Table 4-561 Parameter description of method

Parameter	Mandatory	Type	Description
operationId	No	String	API name
description	No	String	API description
schemes	No	Object	API request protocol. HTTP and HTTPS are supported.
tags	No	Object	API tags
parameters	No	Object	Request parameter definitions. For details, see Table 4-562 .
responses	No	Object	Response definition. For details, see Table 4-563 .
security	No	Object	Security authentication mode. For details, see Table 4-564 .
x-apigateway-access-control	No	Object	Access control policy bound to the API
x-apigateway-backend	No	Object	Backend information. For details, see Table 4-569 .
x-apigateway-backend-policies	No	Object	Backend policy information. For details, see Table 4-570 .
x-apigateway-cors	No	Boolean	Indicates whether CORS is supported.
x-apigateway-match-mode	No	String	Route matching mode
x-apigateway-ratelimit	No	String	Name of the request throttling policy bound to the API
x-apigateway-request-type	No	String	API type

Table 4-562 Frontend parameter description

Parameter	Mandatory	Type	Description
maximum	No	Float	Maximum value of a number type parameter
minimum	No	Float	Minimum value of a number type parameter
maxLength	No	Integer	Maximum length of a string type parameter
minLength	No	Integer	Minimum length of a string type parameter
pattern	No	String	Regular expression of the parameter value
type	No	String	Type
default	No	String	Default value
description	No	String	Parameter description
name	No	String	Parameter name
in	No	String	Parameter location, which can be path , header , query , formData , or body
required	No	Boolean	Whether the parameter is required. The parameter is required when its location is path .

Table 4-563 Parameter description of responses

Parameter	Mandatory	Type	Description
default	No	Object	Default response, which will be used when no status codes are defined
status_code	No	Object	Response status code. The value is a response object. For details, see Table 4-565 .
x-apigateway-result-failure-sample	No	String	Example response for a failed request
x-apigateway-result-normal-sample	No	String	Example response for a successful request

Table 4-564 Parameter description of security

Parameter	Mandatory	Type	Description
apig-auth-type	No	Object	Security authentication mode. This parameter is a null array. Options: <ul style="list-style-type: none"> • apig-auth-app: App authentication • apig-auth-iam: IAM authentication • Null: No authentication required

Table 4-565 Parameter description of status_code

Parameter	Mandatory	Type	Description
description	No	String	Response description
schema	No	Object	Response body. For details, see Table 4-566 .

Table 4-566 Parameter description of schema

Parameter	Mandatory	Type	Description
description	No	String	Body description
type	No	String	Body type, which can be FORM or STREAM

Table 4-567 Parameter description of securityDefinitions

Parameter	Mandatory	Type	Description
name	Yes	Object	Security authentication mode. For details, see Table 4-568 .

Table 4-568 Parameter description of name

Parameter	Mandatory	Type	Description
type	Yes	String	Authentication type. apiKey is supported.

Parameter	Mandatory	Type	Description
name	Yes	String	Name of apiKey
in	Yes	String	Location of apiKey
x-apigateway-auth-type	Yes	String	Authentication type extended based on apiKey. Authentication types AppSigv1, IAM, and IAM_NONE are supported.

Table 4-569 Parameter description of x-apigateway-backend

Parameter	Mandatory	Type	Description
type	Yes	String	Backend type. The options include HTTP , HTTP-VPC , and MOCK .
parameters	No	Object	Backend parameters. For details, see Table 4-571 .
backend_definition	Yes	Object	Backend definition The following backend definitions are supported: <ul style="list-style-type: none"> • httpEndpoints: See Table 4-572. • httpVpcEndpoints: See Table 4-573. • mockEndpoints: See Table 4-574.

Table 4-570 Parameter description of x-apigateway-backend-policies

Parameter	Mandatory	Type	Description
type	Yes	String	Backend type. The options include HTTP , HTTP-VPC , and MOCK .
name	No	String	Backend policy name
parameters	No	Object	Backend parameters. For details, see Table 4-571 .
backend_definition	Yes	Object	Backend definition The following backend definitions are supported: <ul style="list-style-type: none"> • httpEndpoints: See Table 4-572. • httpVpcEndpoints: See Table 4-573. • mockEndpoints: See Table 4-574.

Parameter	Mandatory	Type	Description
conditions	Yes	Object	Policy conditions. For details, see Table 4-575 .
effectMode	Yes	String	Effective mode of the backend policy. The options include ANY and ALL .

Table 4-571 Backend parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name, which consists of a maximum of 32 bytes, starting with a letter. Only letters, digits, periods (.), hyphens (-), and underscores (_) are allowed. The names of header parameters are not case-sensitive.
value	Yes	String	Parameter value, which is a parameter name if the parameter comes from a request
in	Yes	String	Parameter location, which can be header , query , or path
origin	Yes	String	Parameter mapping source. The options include REQUEST and CONSTANT .
description	No	String	Parameter meaning

Table 4-572 Parameter description of backend httpEndpoints

Parameter	Mandatory	Type	Description
address	Yes	String	Backend service address. The format is <i><Domain name or IP address>.[Port number]</i>
scheme	Yes	String	Backend request protocol. HTTP and HTTPS are supported.
method	Yes	String	Backend request method. The options include GET , POST , PUT , DELETE , HEAD , OPTIONS , PATCH , and ANY .

Parameter	Mandatory	Type	Description
path	Yes	String	Backend request path, which can contain variables.
timeout	No	Integer	Backend request timeout in milliseconds. The value ranges from 1 to 60,000, and the default value is 5000 .
description	No	String	Backend description

Table 4-573 Parameter description of backend httpVpcEndpoints

Parameter	Mandatory	Type	Description
name	Yes	Array	VPC channel name
scheme	Yes	String	Backend request protocol. HTTP and HTTPS are supported.
method	Yes	String	Backend request method. The options include GET, POST, PUT, DELETE, HEAD, OPTIONS, PATCH, and ANY .
path	Yes	String	Backend request path, which can contain variables.
timeout	No	Integer	Backend request timeout in milliseconds. The value ranges from 1 to 60,000, and the default value is 5000 .
host	No	String	VPC channel proxy host
description	No	String	Backend description

Table 4-574 Parameter description of backend mockEndpoints

Parameter	Mandatory	Type	Description
result-content	Yes	String	Mock response
description	No	String	Backend description

Table 4-575 Parameter description of conditions

Parameter	Mandatory	Type	Description
type	Yes	String	Policy condition type. The options include equal , enum , and pattern .
value	Yes	String	Policy condition value
origin	Yes	String	Policy condition source. The options include source and request .
parameter	No	String	Input parameter name if the origin parameter is set to request .

Table 4-576 Parameter description of x-apigateway-access-controls

Parameter	Mandatory	Type	Description
acl_name	No	Object	Access control policy. For details, see Table 4-577 .

Table 4-577 Parameter description of acl_name

Parameter	Mandatory	Type	Description
acl-type	Yes	String	Access control effect. The options include PERMIT and DENY .
entity-type	Yes	String	Access control object. Only IP addresses and accounts are supported.
value	Yes	String	Access control values, which are separated with commas (,).

Table 4-578 Parameter description of x-apigateway-ratelimits

Parameter	Mandatory	Type	Description
throttle_name	No	Object	Request throttling policy. For details, see Table 4-579 .

Table 4-579 Parameter description of throttle_name

Parameter	Mandatory	Type	Description
api-limit	Yes	Integer	Maximum number of times an API can be called
user-limit	No	Integer	Number of times the API can be called by a user
app-limit	No	Integer	Number of times the API can be called by an app
ip-limit	No	Integer	Number of times the API can be called by an IP address
interval	Yes	Integer	Throttling period
unit	Yes	String	Throttling unit, which can be SECOND , MINUTE , HOUR , or DAY
shared	No	Boolean	Whether to share the throttling limits among APIs
special	No	Object	Excluded request throttling configurations. For details, see Table 4-580 .

Table 4-580 Parameter description of special

Parameter	Mandatory	Type	Description
type	Yes	String	Excluded request throttling type, which can be APP or USER
limit	Yes	Integer	Access limit
instance	Yes	String	Excluded app or user

Example request:

```
{
  "swagger": "2.0",
  "info": {
    "description": "api group test",
    "title": "APIGroup_test",
    "version": "2019-09-12-17:38:10"
  },
  "paths": {
    "/test/{path}": {
      "get": {
        "security": [
          {
            "apig-auth-app": []
          }
        ]
      }
    }
  }
}
```

```
],
  "description": "api test",
  "schemes": [
    "https"
  ],
  "operationId": "API_test",
  "parameters": [
    {
      "type": "string",
      "description": "header parameter",
      "name": "header",
      "in": "header",
      "required": true
    },
    {
      "type": "string",
      "description": "path parameter",
      "name": "path",
      "in": "path",
      "required": true
    },
    {
      "type": "number",
      "default": "123",
      "description": "query parameter",
      "name": "query",
      "in": "query"
    }
  ],
  "responses": {
    "default": {
      "$ref": "#/responses/default"
    },
    "x-apigateway-result-failure-sample": "",
    "x-apigateway-result-normal-sample": "success"
  },
  "x-apigateway-backend": {
    "httpEndpoints": {
      "address": "1.1.1.1:443",
      "description": "",
      "method": "GET",
      "path": "/test/{path}",
      "scheme": "https",
      "timeout": 5000
    }
  },
  "parameters": [
    {
      "description": "",
      "in": "HEADER",
      "name": "header",
      "origin": "REQUEST",
      "value": "header"
    },
    {
      "description": "",
      "in": "PATH",
      "name": "path",
      "origin": "REQUEST",
      "value": "path"
    },
    {
      "description": "",
      "in": "QUERY",
      "name": "query",
      "origin": "REQUEST",
      "value": "query"
    }
  ],
  "type": "HTTP"
}
```

```

    },
    "x-apigateway-backend-policies": [
      {
        "conditions": [
          {
            "origin": "param",
            "parameter": "path",
            "type": "exact",
            "value": "path"
          },
          {
            "origin": "source",
            "parameter": "",
            "type": "",
            "value": "1.0.0.0/8"
          }
        ],
        "effectMode": "ANY",
        "httpVpcEndpoints": {
          "method": "POST",
          "name": "VPC_n9ct",
          "path": "/",
          "scheme": "HTTPS",
          "timeout": 5000
        },
        "name": "policy_test",
        "type": "HTTP-VPC"
      }
    ],
    "x-apigateway-cors": false,
    "x-apigateway-match-mode": "NORMAL",
    "x-apigateway-request-type": "public"
  }
},
"responses": {
  "default": {
    "description": "response example"
  }
},
"securityDefinitions": {
  "apig-auth-app": {
    "type": "apiKey",
    "name": "Authorization",
    "in": "header",
    "x-apigateway-auth-type": "AppSigv1"
  },
  "apig-auth-iam": {
    "type": "apiKey",
    "name": "unused",
    "in": "header",
    "x-apigateway-auth-type": "IAM"
  }
}
}

```

Response

Table 4-581 Parameter description

Parameter	Type	Description
group_id	String	API group ID
success	Array	Import success information

Parameter	Type	Description
failure	Array	Import failure information

Table 4-582 Parameter description of success

Parameter	Type	Description
id	String	ID of a successfully imported API
action	String	Import type. Options: <ul style="list-style-type: none"> • update: Updates the APIs in an existing API group. • create: Creates APIs for a new API group.
method	String	Request method
path	String	Request path

Table 4-583 Parameter description of failure

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message
method	String	Request method
path	String	Request path

Example response:

```
{
  "group_id": "27aa2317e3514c5bb5aab5587a5e50ea",
  "success": [
    {
      "id": "aea39194d8db46408be0174b0bd15931",
      "action": "create",
      "method": "GET",
      "path": "/test01"
    }
  ],
  "failure": [
    {
      "error_code": "APIG.2011",
      "error_msg": "Parameter value does not match the rules,parameterName:backend_type",
      "method": "GET",
      "path": "/test02"
    }
  ]
}
```

Status Codes

Table 4-584 Status codes

Status Code	Description
200	OK
400	Bad Request
403	Forbidden
500	Server Internal Error

4.18.4 Importing APIs to an Existing API Group

Function

This API is used to create or update APIs in an API group by importing Swagger definitions. Swagger files in JSON or YAML format are supported.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-585

Request Method	URI
PUT	/v1.0/apigw/openapi?group_id={0}&mode={1}

The following table lists the parameters in the URI.

Table 4-586 Parameter description

Parameter	Mandatory	Type	Description
group_id	Yes	String	API group ID
mode	Yes	String	Action to be taken if a conflict occurs. Options: merge and override . <ul style="list-style-type: none"> • merge: Retains the original API. • override: Overwrites the existing API.

Parameter	Mandatory	Type	Description
extend_mode	No	String	Extended definition import mode. The options include merge and override . If the extended definition conflicts with existing API definition, you can choose to retain or override the existing definition.

Request

Table 4-587 Parameter description

Parameter	Mandatory	Type	Description
swagger	Yes	String	The value is fixed at 2.0 .
info	Yes	Object	See Table 4-588 .
paths	Yes	Object	See Table 4-589 .
responses	No	Object	Common response, which can be referenced in {method} . For details, see Table 4-593 .
securityDefinitions	Yes	Object	Security authentication mode definition. For details, see Table 4-597 .
x-apigateway-access-controls	No	Object	Access control information. For details, see Table 4-606 .
x-apigateway-ratelimits	No	Object	Request throttling information. For details, see Table 4-608 .

Table 4-588 Parameter description of info

Parameter	Mandatory	Type	Description
title	No	String	Name of an API group. This parameter does not take effect when the API group is imported to an existing group.
version	No	String	Version number. You can specify a version number or use the current date and time by default.

Parameter	Mandatory	Type	Description
description	No	String	Description of the API group

Table 4-589 Parameter description of paths

Parameter	Mandatory	Type	Description
uri	Yes	Object	API access address. For details, see Table 4-590 .

Table 4-590 Parameter description of uri

Parameter	Mandatory	Type	Description
method	Yes	Object	API access method. For details, see Table 4-591 .

Table 4-591 Parameter description of method

Parameter	Mandatory	Type	Description
operationId	No	String	API name
description	No	String	API description
schemes	No	Object	API request protocol. HTTP and HTTPS are supported.
tags	No	Object	API tags
parameters	No	Object	Request parameter definitions. For details, see Table 4-592 .
responses	No	Object	Response definition. For details, see Table 4-593 .
security	No	Object	Security authentication mode. For details, see Table 4-594 .
x-apigateway-access-control	No	Object	Access control policy bound to the API
x-apigateway-backend	No	Object	Backend information. For details, see Table 4-599 .

Parameter	Mandatory	Type	Description
x-apigateway-backend-policies	No	Object	Backend policy information. For details, see Table 4-600 .
x-apigateway-cors	No	Boolean	Indicates whether CORS is supported.
x-apigateway-match-mode	No	String	Route matching mode
x-apigateway-ratelimit	No	String	Name of the request throttling policy bound to the API
x-apigateway-request-type	No	String	API type

Table 4-592 Frontend parameter description

Parameter	Mandatory	Type	Description
maximum	No	Float	Maximum value of a number type parameter
minimum	No	Float	Minimum value of a number type parameter
maxLength	No	Integer	Maximum length of a string type parameter
minLength	No	Integer	Minimum length of a string type parameter
pattern	No	String	Regular expression of the parameter value
type	No	String	Type
default	No	String	Default value
description	No	String	Parameter description
name	No	String	Parameter name
in	No	String	Parameter location, which can be path , header , query , formData , or body
required	No	Boolean	Whether the parameter is required. The parameter is required when its location is path .

Table 4-593 Parameter description of responses

Parameter	Mandatory	Type	Description
default	No	Object	Default response, which will be used when no status codes are defined
status_code	No	Object	Response status code. The value is a response object. For details, see Table 4-595 .
x-apigateway-result-failure-sample	No	String	Example response for a failed request
x-apigateway-result-normal-sample	No	String	Example response for a successful request

Table 4-594 Parameter description of security

Parameter	Mandatory	Type	Description
apig-auth-type	No	Object	Security authentication mode. This parameter is a null array. Options: <ul style="list-style-type: none"> • apig-auth-app: App authentication • apig-auth-iam: IAM authentication • Null: No authentication required

Table 4-595 Parameter description of status_code

Parameter	Mandatory	Type	Description
description	No	String	Response description
schema	No	Object	Response body. For details, see Table 4-596 .

Table 4-596 Parameter description of schema

Parameter	Mandatory	Type	Description
description	No	String	Body description
type	No	String	Body type, which can be FORM or STREAM

Table 4-597 Parameter description of securityDefinitions

Parameter	Mandatory	Type	Description
name	Yes	Object	Security authentication mode. For details, see Table 4-598 .

Table 4-598 Parameter description of name

Parameter	Mandatory	Type	Description
type	Yes	String	Authentication type. apiKey is supported.
name	Yes	String	Name of apiKey
in	Yes	String	Location of apiKey
x-apigateway-auth-type	Yes	String	Authentication type extended based on apiKey. Authentication types AppSigv1, IAM, and IAM_NONE are supported.

Table 4-599 Parameter description of x-apigateway-backend

Parameter	Mandatory	Type	Description
type	Yes	String	Backend type. The options include HTTP , HTTP-VPC , and MOCK .
parameters	No	Object	Backend parameters. For details, see Table 4-601 .

Parameter	Mandatory	Type	Description
backend_definition	Yes	Object	Backend definition The following backend definitions are supported: <ul style="list-style-type: none"> • httpEndpoints: See Table 4-602. • httpVpcEndpoints: See Table 4-603. • mockEndpoints: See Table 4-604.

Table 4-600 Parameter description of x-apigateway-backend-policies

Parameter	Mandatory	Type	Description
type	Yes	String	Backend type. The options include HTTP , HTTP-VPC , and MOCK .
name	No	String	Backend policy name
parameters	No	Object	Backend parameters. For details, see Table 4-601 .
backend_definition	Yes	Object	Backend definition The following backend definitions are supported: <ul style="list-style-type: none"> • httpEndpoints: See Table 4-602. • httpVpcEndpoints: See Table 4-603. • mockEndpoints: See Table 4-604.
conditions	Yes	Object	Policy conditions. For details, see Table 4-605 .
effectMode	Yes	String	Effective mode of the backend policy. The options include ANY and ALL .

Table 4-601 Backend parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name, which consists of a maximum of 32 bytes, starting with a letter. Only letters, digits, periods (.), hyphens (-), and underscores (_) are allowed. The names of header parameters are not case-sensitive.

Parameter	Mandatory	Type	Description
value	Yes	String	Parameter value, which is a parameter name if the parameter comes from a request
in	Yes	String	Parameter location, which can be header , query , or path
origin	Yes	String	Parameter mapping source. The options include REQUEST and CONSTANT .
description	No	String	Parameter meaning

Table 4-602 Parameter description of backend httpEndpoints

Parameter	Mandatory	Type	Description
address	Yes	String	Backend service address. The format is <i><Domain name or IP address>:[Port number]</i>
scheme	Yes	String	Backend request protocol. HTTP and HTTPS are supported.
method	Yes	String	Backend request method. The options include GET , POST , PUT , DELETE , HEAD , OPTIONS , PATCH , and ANY .
path	Yes	String	Backend request path, which can contain variables.
timeout	No	Integer	Backend request timeout in milliseconds. The value ranges from 1 to 60,000, and the default value is 5000 .
description	No	String	Backend description

Table 4-603 Parameter description of backend httpVpcEndpoints

Parameter	Mandatory	Type	Description
name	Yes	Array	VPC channel name
scheme	Yes	String	Backend request protocol. HTTP and HTTPS are supported.

Parameter	Mandatory	Type	Description
method	Yes	String	Backend request method. The options include GET , POST , PUT , DELETE , HEAD , OPTIONS , PATCH , and ANY .
path	Yes	String	Backend request path, which can contain variables.
timeout	No	Integer	Backend request timeout in milliseconds. The value ranges from 1 to 60,000, and the default value is 5000 .
host	No	String	VPC channel proxy host
description	No	String	Backend description

Table 4-604 Parameter description of backend mockEndpoints

Parameter	Mandatory	Type	Description
result-content	Yes	String	Mock response
description	No	String	Backend description

Table 4-605 Parameter description of conditions

Parameter	Mandatory	Type	Description
type	Yes	String	Policy condition type. The options include equal , enum , and pattern .
value	Yes	String	Policy condition value
origin	Yes	String	Policy condition source. The options include source and request .
parameter	No	String	Input parameter name if the origin parameter is set to request .

Table 4-606 Parameter description of x-apigateway-access-controls

Parameter	Mandatory	Type	Description
acl_name	No	Object	Access control policy. For details, see Table 4-607 .

Table 4-607 Parameter description of `acl_name`

Parameter	Mandatory	Type	Description
<code>acl-type</code>	Yes	String	Access control effect. The options include PERMIT and DENY .
<code>entity-type</code>	Yes	String	Access control object. Only IP addresses and accounts are supported.
<code>value</code>	Yes	String	Access control values, which are separated with commas (,).

Table 4-608 Parameter description of `x-apigateway-ratelimits`

Parameter	Mandatory	Type	Description
<code>throttle_name</code>	No	Object	Request throttling policy. For details, see Table 4-609 .

Table 4-609 Parameter description of `throttle_name`

Parameter	Mandatory	Type	Description
<code>api-limit</code>	Yes	Integer	Maximum number of times an API can be called
<code>user-limit</code>	No	Integer	Number of times the API can be called by a user
<code>app-limit</code>	No	Integer	Number of times the API can be called by an app
<code>ip-limit</code>	No	Integer	Number of times the API can be called by an IP address
<code>interval</code>	Yes	Integer	Throttling period
<code>unit</code>	Yes	String	Throttling unit, which can be SECOND , MINUTE , HOUR , or DAY
<code>shared</code>	No	Boolean	Whether to share the throttling limits among APIs
<code>special</code>	No	Object	Excluded request throttling configurations. For details, see Table 4-610 .

Table 4-610 Parameter description of special

Parameter	Mandatory	Type	Description
type	Yes	String	Excluded request throttling type, which can be APP or USER
limit	Yes	Integer	Access limit
instance	Yes	String	Excluded app or user

Example request:

```
{
  "swagger": "2.0",
  "info": {
    "description": "api group test",
    "title": "APIGroup_test",
    "version": "2019-09-12-17:38:10"
  },
  "paths": {
    "/test/{path}": {
      "get": {
        "security": [
          {
            "apig-auth-app": []
          }
        ],
        "description": "api test",
        "schemes": [
          "https"
        ],
        "operationId": "API_test",
        "parameters": [
          {
            "type": "string",
            "description": "header parameter",
            "name": "header",
            "in": "header",
            "required": true
          },
          {
            "type": "string",
            "description": "path parameter",
            "name": "path",
            "in": "path",
            "required": true
          },
          {
            "type": "number",
            "default": "123",
            "description": "query parameter",
            "name": "query",
            "in": "query"
          }
        ],
        "responses": {
          "default": {
            "$ref": "#/responses/default"
          },
          "x-apigateway-result-failure-sample": "",
          "x-apigateway-result-normal-sample": "success"
        }
      }
    }
  }
}
```

```
"x-apigateway-backend": {
  "httpEndpoints": {
    "address": "1.1.1.1:443",
    "description": "",
    "method": "GET",
    "path": "/test/{path}",
    "scheme": "https",
    "timeout": 5000
  },
  "parameters": [
    {
      "description": "",
      "in": "HEADER",
      "name": "header",
      "origin": "REQUEST",
      "value": "header"
    },
    {
      "description": "",
      "in": "PATH",
      "name": "path",
      "origin": "REQUEST",
      "value": "path"
    },
    {
      "description": "",
      "in": "QUERY",
      "name": "query",
      "origin": "REQUEST",
      "value": "query"
    }
  ],
  "type": "HTTP"
},
"x-apigateway-backend-policies": [
  {
    "conditions": [
      {
        "origin": "param",
        "parameter": "path",
        "type": "exact",
        "value": "path"
      },
      {
        "origin": "source",
        "parameter": "",
        "type": "",
        "value": "1.0.0.0/8"
      }
    ],
    "effectMode": "ANY",
    "httpVpcEndpoints": {
      "method": "POST",
      "name": "VPC_n9ct",
      "path": "/",
      "scheme": "HTTPS",
      "timeout": 5000
    },
    "name": "policy_test",
    "type": "HTTP-VPC"
  }
],
"x-apigateway-cors": false,
"x-apigateway-match-mode": "NORMAL",
"x-apigateway-request-type": "public"
}
},
"responses": {
```

```

"default": {
  "description": "response example"
},
"securityDefinitions": {
  "apig-auth-app": {
    "type": "apiKey",
    "name": "Authorization",
    "in": "header",
    "x-apigateway-auth-type": "AppSigv1"
  },
  "apig-auth-iam": {
    "type": "apiKey",
    "name": "unused",
    "in": "header",
    "x-apigateway-auth-type": "IAM"
  }
}
}

```

Response

Table 4-611 Parameter description

Parameter	Type	Description
group_id	String	API group ID
success	Array	Import success information
failure	Array	Import failure information

Table 4-612 Parameter description of success

Parameter	Type	Description
id	String	ID of a successfully imported API
action	String	Import type. Options: <ul style="list-style-type: none"> • update: Updates the APIs in an existing API group. • create: Creates APIs for a new API group.
method	String	Request method
path	String	Request path

Table 4-613 Parameter description of failure

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

Parameter	Type	Description
method	String	Request method
path	String	Request path

Example response:

```
{
  "group_id": "27aa2317e3514c5bb5aab5587a5e50ea",
  "success": [
    {
      "id": "aea39194d8db46408be0174b0bd15931",
      "action": "create",
      "method": "GET",
      "path": "/test01"
    }
  ],
  "failure": [
    {
      "error_code": "APIG.2011",
      "error_msg": "Parameter value does not match the rules,parameterName:backend_type",
      "method": "GET",
      "path": "/test02"
    }
  ]
}
```

Status Codes

Table 4-614 Status codes

Status Code	Description
200	OK
400	Bad Request
403	Forbidden
500	Server Internal Error

4.19 Custom Authorizer Management

4.19.1 Creating a Custom Authorizer

Function

This API is used to create a custom authorizer.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-615 HTTP/HTTPS request method and URI

Request Method	URI
POST	/v1.0/apigw/authorizers

Request

Table 4-616 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Name of a custom authorizer The name of a custom authorizer consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
type	Yes	String	Type of the custom authorizer, which can be: <ul style="list-style-type: none"> • FRONTEND • BACKEND
authorizer_type	Yes	String	Value: FUNC
authorizer_uri	Yes	String	Function URN
identities	No	List	Certification source
ttl	No	Integer	Cache duration
user_data	No	String	User data

Table 4-617 Parameter description of identities

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name
location	Yes	String	Parameter location, which can be: <ul style="list-style-type: none"> • HEADER • QUERY

Example request:

```
{
  "name":"Authorizer_9dlh",
  "type":"FRONTEND",
  "authorizer_type":"FUNC",
  "authorizer_uri":"urn:fss:regionexample:dbb5762c88f045c6a1427a952bcae284:function:default:test111",
  "ttl":10,
  "user_data":"aaaa",
  "identities":[
    {
      "name":"Authorization",
      "location":"HEADER"
    }
  ]
}
```

Response

Table 4-618 Parameter description

Parameter	Type	Description
id	String	ID of the custom authorizer
name	String	Name of the custom authorizer
type	String	Type of the custom authorizer, which can be: <ul style="list-style-type: none"> FRONTEND BACKEND
authorizer_type	String	Value: FUNC
authorizer_uri	String	Function URN
identities	Array	Certification source
ttl	Integer	Cache duration
user_data	String	User data
create_time	Time	Time when the custom authorizer is created

Table 4-619 Parameter description of identities

Parameter	Type	Description
name	String	Parameter name
location	String	Parameter location, which can be: <ul style="list-style-type: none"> HEADER QUERY

Example response:

```
{
  "name":"Authorizer_9dlh",
```

```

"type":"FRONTEND",
"authorizer_type":"FUNC",
"authorizer_uri":"urn:fss:regionexample:dbb5762c88f045c6a1427a952bcae284:function:default:test111",
"identities":[
  {
    "name":"Authorization",
    "location":"HEADER",
  }
],
"ttl":10,
"user_data":"aaaa",
"id":"7345e3fe4047491ebd8ecb0acd665a4c",
"create_time":"2020-01-19T11:48:56.576611862Z"
}

```

Status Codes

Table 4-620 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

4.19.2 Modifying a Custom Authorizer

Function

This API is used to modify a specified custom authorizer.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-621 HTTP/HTTPS request method and URI

Request Method	URI
PUT	/v1.0/apigw/authorizers/{id}

The following table lists the parameter in the URI.

Table 4-622 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a custom authorizer

Request

Table 4-623 Parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the custom authorizer The name of a custom authorizer consists of 3–64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
type	Yes	String	Type of the custom authorizer, which can be: <ul style="list-style-type: none"> FRONTEND BACKEND
authorizer_type	Yes	String	Value: FUNC
authorizer_uri	Yes	String	Function URN
identities	No	List	Certification source
ttl	No	Integer	Cache duration
user_data	No	String	User data

Table 4-624 Parameter description of identities

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name
location	Yes	String	Parameter location, which can be: <ul style="list-style-type: none"> HEADER QUERY

Example request:

```
{
  "name": "Authorizer_9dlh",
  "type": "FRONTEND",
  "authorizer_type": "FUNC",
  "authorizer_uri": "urn:fss:regionexample:dbb5762c88f045c6a1427a952bcae284:function:default:test111",
  "ttl": 10,
  "user_data": "aaaa",
  "identities": [
    {
      "name": "Authorization",
      "location": "HEADER"
    }
  ]
}
```

Response

Table 4-625 Parameter description

Parameter	Type	Description
id	String	ID of the custom authorizer
name	String	Name of the custom authorizer
type	String	Type of the custom authorizer, which can be: <ul style="list-style-type: none"> FRONTEND BACKEND
authorizer_type	String	Value: FUNC
authorizer_uri	String	Function URN
identities	Array	Certification source
ttl	Integer	Cache duration
user_data	String	User data
create_time	Time	Time when the custom authorizer is created

Table 4-626 Parameter description of identities

Parameter	Type	Description
name	String	Parameter name
location	String	Parameter location, which can be: <ul style="list-style-type: none"> HEADER QUERY

Example response:

```
{
  "name": "Authorizer_9dlh",
```

```

"type":"FRONTEND",
"authorizer_type":"FUNC",
"authorizer_uri":"urn:fss:regionexample:dbb5762c88f045c6a1427a952bcae284:function:default:test111",
"identities":[
  {
    "name":"Authorization",
    "location":"HEADER",
  }
],
"ttl":10,
"user_data":"aaaa",
"id":"7345e3fe4047491ebd8ecb0acd665a4c",
"create_time":"2020-01-19T11:48:56.576611862Z"
}

```

Status Codes

Table 4-627 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

4.19.3 Deleting a Custom Authorizer

Function

This API is used to delete a specified custom authorizer.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-628 HTTP/HTTPS request method and URI

Request Method	URI
DELETE	/v1.0/apigw/authorizers/{id}

The following table lists the parameter in the URI.

Table 4-629 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a custom authorizer

Request

N/A

Response

N/A

Status Codes

Table 4-630 Status codes

Status Code	Description
204	No Content
401	Unauthorized
403	Forbidden
404	Not Found
409	Conflict
500	Server Internal Error

4.19.4 Querying Details of a Custom Authorizer

Function

This API is used to query the details of a specified custom authorizer.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-631 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/authorizers/{id}

The following table lists the parameters in the URI.

Table 4-632 Parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a custom authorizer

Request

N/A

Response

Table 4-633 Parameter description

Parameter	Type	Description
id	String	ID of the custom authorizer
name	String	Name of the custom authorizer
type	String	Type of the custom authorizer, which can be: <ul style="list-style-type: none"> FRONTEND BACKEND
authorizer_type	String	Value: FUNC
authorizer_uri	String	Function URN
identities	Array	Certification source
ttl	Integer	Cache duration
user_data	String	User data
create_time	Time	Time when the custom authorizer is created

Table 4-634 Parameter description of identities

Parameter	Type	Description
name	String	Parameter name
location	String	Parameter location, which can be: <ul style="list-style-type: none"> HEADER QUERY

Example response:

```
{
  "name":"Authorizer_9dlh",
  "type":"FRONTEND",
  "authorizer_type":"FUNC",
  "authorizer_uri":"urn:fss:regionexample:dbb5762c88f045c6a1427a952bcae284:function:default:test111",
  "identities":[
    {
      "name":"Authorization",
      "location":"HEADER",
    }
  ],
  "ttl":10,
  "user_data":"aaaa",
  "id":"7345e3fe4047491ebd8ecb0acd665a4c",
  "create_time":"2020-01-19T11:48:56.576611862Z"
}
```

Status Codes

Table 4-635 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

4.19.5 Querying a Custom Authorizer List

Function

This API is used to query a list of custom authorizers that match specified conditions.

URI

The following table lists the HTTP/HTTPS request method and URI of the API.

Table 4-636 HTTP/HTTPS request method and URI

Request Method	URI
GET	/v1.0/apigw/authorizers[?page_size, page_no, id, name, type]

 **NOTE**

- A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&).
- Query conditions include: **id**, **name**, **type**, **page_size**, and **page_no**.

The following table lists the parameters in the URI.

Table 4-637 Parameter description

Parameter	Mandatory	Type	Description
id	No	String	ID of a custom authorizer
name	No	String	Name of the custom authorizer
type	No	String	Type of the custom authorizer
page_size	No	Integer	Number of records displayed on each page. The default value is 20 .
page_no	No	Integer	Page number. The default value is 1 .

Request

N/A

Response

Table 4-638 Parameter description

Parameter	Type	Description
total	Integer	Number of custom authorizers that match the query conditions
size	Integer	Length of the returned custom authorizer list
authorizer_list	Array	Custom authorizer list

Table 4-639 Parameter description of `authorizer_list`

Parameter	Type	Description
<code>id</code>	String	ID of the custom authorizer
<code>name</code>	String	Name of the custom authorizer
<code>type</code>	String	Type of the custom authorizer, which can be: <ul style="list-style-type: none"> • FRONTEND • BACKEND
<code>authorizer_type</code>	String	Value: FUNC
<code>authorizer_uri</code>	String	Function URN
<code>identities</code>	Array	Certification source
<code>ttl</code>	Integer	Cache duration
<code>user_data</code>	String	User data
<code>create_time</code>	Time	Time when the custom authorizer is created

Table 4-640 Parameter description of `identities`

Parameter	Type	Description
<code>name</code>	String	Parameter name
<code>location</code>	String	Parameter location, which can be: <ul style="list-style-type: none"> • HEADER • QUERY

Example response:

```
{
  "total":1,
  "size":1,
  "authorizer_list":[
    {
      "name":"Authorizer_9dlh",
      "type":"FRONTEND",
      "authorizer_type":"FUNC",
      "authorizer_uri":"urn:fss:regionexample:dbb5762c88f045c6a1427a952bcae284:function:default:test111",
      "identities":[
        {
          "name":"Authorization",
          "location":"HEADER",
        }
      ],
      "ttl":10,
      "user_data":"aaaa",
      "id":"7345e3fe4047491ebd8ecb0acd665a4c",
      "create_time":"2020-01-19T11:48:56Z"
    }
  ]
}
```



```
}  
  ]  
}
```

Status Codes

Table 4-641 Status codes

Status Code	Description
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

A Appendix

A.1 Pagination Query

API Gateway supports pagination query of resource lists, such as an API list.

To perform a pagination query, add the following parameters to the URL:

- **page_size**: number of records to be displayed on each page. If this parameter is not specified, the default value **20** is used. The maximum value is **500**.
- **page_no**: page number for displaying query results.

Example:

```
GET /v1.0/apigw/apis?page_size=10&page_no=5
```

A.2 Result Filtering

API Gateway filters query results by object attribute when you query a resource list, such as an API list.

Example:

```
GET /v1.0/apigw/apis?id=xxxx
```

A.3 HTTP Status Codes

[Table A-1](#) describes common status codes.

Table A-1 HTTP status codes

Status Code & Message	Description
200 OK	The request has been processed successfully.
204 No Content	The server successfully processed the request and is not returning any content.

Status Code & Message	Description
400 Bad Request	The server failed to process the request. Possible causes include: 1. Malformed request syntax 2. Invalid request message framing
401 Unauthorized	The request requires user authentication. For example, the username and password are required.
403 Forbidden	The server understood the request, but is refusing to fulfill it.
404 Not Found	The server has not found anything matching the request URI.
405 Method Not Allowed	The method specified in the request line is not allowed for the resource identified by the request URI.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must first authenticate yourself with the proxy.
408 Request Timeout	The server timed out waiting for the request.
409 Conflict	The request could not be completed due to a conflict with the current state of the resource.
410 Gone	The requested resource is no longer available at the server and no forwarding address is known.
412 Precondition Failed	The server does not meet one of the preconditions that the requester put on the request.
500 Internal Server Error	The server encountered an unexpected condition which prevented it from fulfilling the request.
501 Not Implemented	The server does not support the functionality required to fulfill the request.
502 Bad Gateway	The server, while acting as a gateway or proxy, received an invalid response from the upstream server it accessed in attempting to fulfill the request.
503 Service Unavailable	The server is currently unable to handle the request due to a temporary overloading or maintenance of the server.
504 Gateway Timeout	The server was acting as a gateway or proxy and did not receive a timely response from the upstream server.

A.4 Error Codes

Status Code	Error Codes	Error Message	Description	Solution
204	APIG.0000	Successful	Successful	You do not need to take any actions.
400	APIG.1119	No permissions to perform operations on this method.	No permissions to perform operations on this method.	Apply for the required permissions and try again.
400	APIG.1120	No permissions to create ELB channels.	No permissions to create ELB channels.	Ensure that the ELB channel belongs to your account. If you are an IAM user, apply for the required permissions.
400	APIG.1201	The resources belong to different tenants.	The resources belong to different tenants.	Ensure that the resources belong to the same tenant.
400	APIG.2000	Parameter error.	Parameter error.	Modify the request parameters based on the reasons stated in the API response.
400	APIG.2001	The request parameters must be specified.	The request parameters must be specified.	Set request parameters.
400	APIG.2002	The parameter value is too small.	The parameter value is too small.	Modify the request parameter.
400	APIG.2003	The parameter value is too large.	The parameter value is too large.	Modify the request parameter.

Status Code	Error Codes	Error Message	Description	Solution
400	APIG.2004	The parameter value is outside the allowable range.	The parameter value is outside the allowable range.	Modify the request parameter.
400	APIG.2005	The parameter is too short.	The parameter is too short.	Modify the request parameter.
400	APIG.2006	The parameter is too long.	The parameter is too long.	Modify the request parameter.
400	APIG.2007	Invalid length.	Invalid length.	Modify the request parameter.
400	APIG.2008	Only letters are allowed.	Only letters are allowed.	Modify the request parameter.
400	APIG.2009	Only digits are allowed.	Only digits are allowed.	Modify the request parameter.
400	APIG.2010	Only letters and digits are allowed.	Only letters and digits are allowed.	Modify the request parameter.
400	APIG.2011	Invalid parameter value.	Invalid parameter value.	Modify the request parameter.
400	APIG.2012	Invalid parameter value.	Invalid parameter value.	Modify the request parameter.
400	APIG.2013	Only letters, digits, hyphens (-), and underscores (_) are allowed.	Only letters, digits, hyphens (-), and underscores (_) are allowed.	Modify the request parameter.
400	APIG.2014	Invalid email address.	Invalid email address.	Modify the request parameter.

Status Code	Error Codes	Error Message	Description	Solution
400	APIG.2015	Invalid IP address.	Invalid IP address.	Modify the request parameter.
400	APIG.2016	The characters are not encoded using Base 64.	The characters are not encoded using Base 64.	Change the value of the request parameter to a Base 64-encoded character string.
400	APIG.2017	Invalid mobile number.	Invalid mobile number.	Modify the request parameter.
400	APIG.2018	Invalid telephone number.	Invalid telephone number.	Modify the request parameter.
400	APIG.2019	Invalid telephone or mobile number.	Invalid telephone or mobile number.	Modify the request parameter.
400	APIG.2020	Invalid postal code.	Invalid postal code.	Modify the request parameter.
400	APIG.2021	The URL domain is not included in the IP address whitelist.	The URL domain is not included in the IP address whitelist.	Modify the request parameter.
400	APIG.2022	The URL domain is included in the IP address blacklist.	The URL domain is included in the IP address blacklist.	Modify the request parameter.
400	APIG.2023	URL domain CNAME resolution failed.	URL domain CNAME resolution failed.	Register the CNAME resolution record of the domain name.
400	APIG.2024	Invalid URL domain.	Invalid URL domain.	Use a correct domain name.
400	APIG.2025	Invalid backend port number.	Invalid backend port number.	Use a correct port number.

Status Code	Error Codes	Error Message	Description	Solution
400	APIG.2026	The request path parameters do not match the request URI.	The request path parameters do not match the request URI.	Add the parameters contained in the request path to the request parameters.
400	APIG.2027	The backend path parameters do not match the backend URI.	The backend path parameters do not match the backend URI.	Add the parameters contained in the backend request path to the backend parameters.
400	APIG.2028	The backend parameters are not mapped to the request parameters.	The backend parameters are not mapped to the request parameters.	Change the source of backend parameters to the corresponding request parameters.
400	APIG.2029	The default certificate already exists.	The default certificate already exists.	Contact technical support for assistance.
400	APIG.2030	Bad request for debugging the API.	Bad request for debugging the API.	Set correct API debugging parameters.
400	APIG.2034	The domain name has not been filed. File it first.	The domain name has not been filed. File it first.	Complete ICP filing for the domain name.
400	APIG.2035	The ICP Filing System is busy. Please try again later.	The ICP Filing System is busy. Please try again later.	Contact technical support for assistance.
400	APIG.2036	Only APIs with authorizer can have authorizer parameters	Only APIs with authorizer can have authorizer parameters	Delete unnecessary parameters.
400	APIG.2101	The certificate and private key do not match.	The certificate and private key do not match.	Use a certificate and private key that match each other.

Status Code	Error Codes	Error Message	Description	Solution
400	APIG.2102	The certificate has expired.	The certificate has expired.	Use a valid certificate.
400	APIG.2103	The certificate common name does not match the domain name.	The certificate common name does not match the domain name.	Ensure that the domain name in the certificate is the same as a custom domain name.
400	APIG.2104	The certificate chain is not matched.	The certificate chain is not matched.	In a certificate chain, ensure that the server certificate is in the first place and followed by other certificates in sequence.
400	APIG.2105	Encrypted private keys are not supported.	Encrypted private keys are not supported.	Use unencrypted private keys.
400	APIG.2106	Invalid certificate or private key.	Invalid certificate or private key.	Use a correct certificate and private key.
400	APIG.3201	The API group name already exists.	The API group name already exists.	Use another name.
400	APIG.3202	The API name already exists.	The API name already exists.	Use another name.
400	APIG.3203	The app name already exists.	The app name already exists.	Use another name.
400	APIG.3204	The request throttling policy name already exists.	The request throttling policy name already exists.	Use another name.
400	APIG.3205	The environment name already exists.	The environment name already exists.	Use another name.

Status Code	Error Codes	Error Message	Description	Solution
400	APIG.3206	The access control policy name already exists.	The access control policy name already exists.	Use another name.
400	APIG.3207	The signature key name already exists.	The signature key name already exists.	Use another name.
400	APIG.3208	The VPC channel name already exists.	The VPC channel name already exists.	Use another name.
400	APIG.3209	The parameter name already exists.	The parameter name already exists.	Use another name.
400	APIG.3210	The backend policy name already exists.	The backend policy name already exists.	Use another name.
400	APIG.3211	The authorizer name already exists.	The authorizer name already exists.	Use another name.
400	APIG.3212	The identity name already exists.	The identity name already exists.	Use another name.
400	APIG.3213	The API tag name already exists.	The API tag name already exists.	Use another name.
400	APIG.3216	The response name already exists.	The response name already exists.	Use another name.
400	APIG.3301	The API already exists.	The API already exists.	Change the request method and URL of the API.
400	APIG.3302	The excluded configuration already exists.	The excluded configuration already exists.	Use another name.
400	APIG.3303	The environment variable already exists.	The environment variable already exists.	Use another name.

Status Code	Error Codes	Error Message	Description	Solution
400	APIG.3304	The purchasing order already exists.	The purchasing order already exists.	Contact technical support for assistance.
400	APIG.3305	The URL domain name already exists.	The URL domain name already exists.	Contact technical support for assistance.
400	APIG.3306	The IP address already exists.	The IP address already exists.	Contact technical support for assistance.
400	APIG.3308	The excluded request throttling configuration already exists.	The excluded request throttling configuration already exists.	Contact technical support for assistance.
400	APIG.3309	The operation has already been performed	The operation has already been performed	Contact technical support for assistance.
400	APIG.3310	The app key already exist	The app key already exist	Use another AppKey.
400	APIG.3316	The api auth relation already exists	The api auth relation already exists	Use another API or app.
400	APIG.3600	Json or Yaml format error.	Json or Yaml format error.	Check whether the file to be imported is in correct YAML or JSON format.
400	APIG.3601	The Swagger file version must be 2.0.	The Swagger file version must be 2.0.	Ensure that the Swagger file version is 2.0.
400	APIG.3602	Syntax error in the Swagger file.	Syntax error in the Swagger file.	Check for syntax errors in the Swagger file.
400	APIG.3603	The Swagger file content is too long.	The Swagger file content is too long.	Reduce the size of the Swagger file.
400	APIG.3608	Can not edit Apis from Api Designer	Can not edit Apis from Api Designer	Contact technical support for assistance.

Status Code	Error Codes	Error Message	Description	Solution
400	APIG.3609	The input file is empty	The input file is empty	Use a file that is not empty.
401	APIG.1000	The token is missing.	The token is missing.	Access using a token.
401	APIG.1001	The token has expired.	The token has expired.	Obtain another token and try again.
401	APIG.1002	Incorrect token or token resolution failed.	Incorrect token or token resolution failed.	Use a correct token.
401	APIG.1003	The token does not contain project information.	The token does not contain project information.	Use a token containing project information.
401	APIG.1005	No permissions to request this method.	No permissions to request this method.	Use a token that contains the required permissions.
401	APIG.1007	The domain information is missing.	The domain information is missing.	Contact technical support for assistance.
401	APIG.1008	Unknown domain.	Unknown domain.	Contact technical support for assistance.
401	APIG.1009	The token does not contain user information.	The token does not contain user information.	Use a token containing user information.
401	APIG.1010	PDP server connection failed.	PDP server connection failed.	Contact technical support for assistance.
401	APIG.1011	You can request resources only after you complete real-name authentication.	You can request resources only after you complete real-name authentication.	Perform real-name authentication for your account and try again.

Status Code	Error Codes	Error Message	Description	Solution
401	APIG.1012	Your account balance is insufficient. Top up your account.	Your account balance is insufficient. Top up your account.	Top up your account.
401	APIG.1013	Your account has been frozen. Some functions become unavailable. To unfreeze your account, contact customer service.	Your account has been frozen. Some functions become unavailable. To unfreeze your account, contact customer service.	Restore your account and try again.
403	APIG.1101	No permissions to perform operations on this API group.	No permissions to perform operations on this API group.	Ensure that the API group belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.1102	No permissions to perform operations on this API.	No permissions to perform operations on this API.	Ensure that the API belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.1103	No permissions to perform operations on this environment.	No permissions to perform operations on this environment.	Ensure that the environment belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.1104	No permissions to perform operations on this app.	No permissions to perform operations on this app.	Ensure that the app belongs to your account. If you are an IAM user, apply for the required permissions.

Status Code	Error Codes	Error Message	Description	Solution
403	APIG.1105	No permissions to perform operations on this request throttling policy.	No permissions to perform operations on this request throttling policy.	Ensure that the request throttling policy belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.1106	No permissions to perform operations on this access control policy.	No permissions to perform operations on this access control policy.	Ensure that the access control policy belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.1107	No permissions to perform operations on this configuration.	No permissions to perform operations on this configuration.	Contact technical support for assistance.
403	APIG.1108	No permissions to perform operations on this excluded configuration.	No permissions to perform operations on this excluded configuration.	Contact technical support for assistance.
403	APIG.1109	No permissions to perform operations on this app authorization record.	No permissions to perform operations on this app authorization record.	Ensure that the app authorization information belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.1110	No permissions to perform operations on this environment variable.	No permissions to perform operations on this environment variable.	Ensure that the environment variable belongs to your account. If you are an IAM user, apply for the required permissions.

Status Code	Error Codes	Error Message	Description	Solution
403	APIG.1111	No permissions to perform operations on this subscription record.	No permissions to perform operations on this subscription record.	Ensure that the subscription belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.1112	No permissions to perform operations on this signature key.	No permissions to perform operations on this signature key.	Ensure that the signature key belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.1113	No permissions to perform operations on this VPC channel.	No permissions to perform operations on this VPC channel.	Ensure that the VPC channel belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.1115	No permissions to perform operations on this certificate.	No permissions to perform operations on this certificate.	Ensure that the certificate belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.1116	No permissions to perform operations on this on-sale API.	No permissions to perform operations on this on-sale API.	Ensure that the API belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.1136	no authority to operate instance	no authority to operate instance	Contact technical support for assistance.

Status Code	Error Codes	Error Message	Description	Solution
403	APIG.1137	No permissions to perform operations on this authorizer	No permissions to perform operations on this authorizer	Ensure that the custom authorizer belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.1140	No permissions to perform operations on this feature	No permissions to perform operations on this feature	Ensure that the feature belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.1200	No permissions to perform operations on this API swagger doc	No permissions to perform operations on this API swagger doc	Ensure that the Swagger file belongs to your account. If you are an IAM user, apply for the required permissions.
403	APIG.3100	The number of resources exceeds the maximum allowed limit.	The number of resources exceeds the maximum allowed limit.	Contact technical support to increase the quota.
403	APIG.3101	The number of API groups exceeds the maximum allowed limit.	The number of API groups exceeds the maximum allowed limit.	Contact technical support to increase the quota.
403	APIG.3102	The number of APIs exceeds the maximum allowed limit.	The number of APIs exceeds the maximum allowed limit.	Contact technical support to increase the quota.
403	APIG.3103	The number of apps exceeds the maximum allowed limit.	The number of apps exceeds the maximum allowed limit.	Contact technical support to increase the quota.

Status Code	Error Codes	Error Message	Description	Solution
403	APIG.3104	The number of environments exceeds the maximum allowed limit.	The number of environments exceeds the maximum allowed limit.	Contact technical support to increase the quota.
403	APIG.3105	The number of signature keys exceeds the maximum allowed limit.	The number of signature keys exceeds the maximum allowed limit.	Contact technical support to increase the quota.
403	APIG.3106	The number of variables exceeds the maximum allowed limit.	The number of variables exceeds the maximum allowed limit.	Contact technical support to increase the quota.
403	APIG.3107	The number of request throttling policies exceeds the maximum allowed limit.	The number of request throttling policies exceeds the maximum allowed limit.	Contact technical support to increase the quota.
403	APIG.3108	The number of domain names exceeds the maximum allowed limit.	The number of domain names exceeds the maximum allowed limit.	Contact technical support to increase the quota.
403	APIG.3109	The number of VPC channels exceeds the maximum allowed limit.	The number of VPC channels exceeds the maximum allowed limit.	Contact technical support to increase the quota.
403	APIG.3110	The number of instances exceeds the maximum allowed limit.	The number of instances exceeds the maximum allowed limit.	Contact technical support to increase the quota.

Status Code	Error Codes	Error Message	Description	Solution
403	APIG.3111	The number of parameters in req_params exceeds the maximum allowed limit.	The number of parameters in req_params exceeds the maximum allowed limit.	Contact technical support to increase the quota.
403	APIG.3112	The number of access control policies exceeds the maximum allowed limit.	The number of access control policies exceeds the maximum allowed limit.	Contact technical support to increase the quota.
403	APIG.3113	The maximum number of API backend policies has been reached.	The maximum number of API backend policies has been reached.	Contact technical support to increase the quota.
403	APIG.3114	The maximum number of policy conditions has been reached.	The maximum number of policy conditions has been reached.	Contact technical support to increase the quota.
403	APIG.3116	The number of authorizer exceeds the maximum allowed limit	The number of authorizer exceeds the maximum allowed limit	Contact technical support to increase the quota.
403	APIG.3117	The number of identity exceeds the maximum allowed limit	The number of identity exceeds the maximum allowed limit	Contact technical support to increase the quota.
403	APIG.3125	The maximum number of APIs for one API group has been reached.	The maximum number of APIs for one API group has been reached.	Contact technical support to increase the quota.

Status Code	Error Codes	Error Message	Description	Solution
403	APIG.3127	The number of APIs has reached the upper limit. A maximum of xxx APIs can be imported at a time.	The number of APIs has reached the upper limit. A maximum of xxx APIs can be imported at a time.	Reduce the number of APIs to import.
403	APIG.3131	The number of APP codes exceeds the maximum allowed limit	The number of APP codes exceeds the maximum allowed limit	Contact technical support to increase the quota.
403	APIG.3132	The number of API swaggers for one API group exceeds the maximum allowed limit	The number of API swaggers for one API group exceeds the maximum allowed limit	Contact technical support to increase the quota.
403	APIG.3133	The number of API tags exceeds the maximum allowed limit	The number of API tags exceeds the maximum allowed limit	Contact technical support to increase the quota.
403	APIG.3136	The number of responses exceeds the maximum allowed limit	The number of responses exceeds the maximum allowed limit	Contact technical support to increase the quota.
403	APIG.3411	The APIs belong to different tenants.	The APIs belong to different tenants.	This operation is not allowed.
403	APIG.3412	The API provider has been frozen.	The API provider has been frozen.	Contact technical support for assistance.
403	APIG.3414	The VPC channel is already being used by another API.	The VPC channel is already being used by another API.	Delete the API associated with the VPC channel and then delete the VPC channel.

Status Code	Error Codes	Error Message	Description	Solution
403	APIG.3415	The API group cannot be deleted because it contains APIs.	The API group cannot be deleted because it contains APIs.	Delete the APIs in the API group and then delete the API group.
403	APIG.3416	The API cannot be deleted because it has been published.	The API cannot be deleted because it has been published.	Take the API offline and then delete it.
403	APIG.3418	The environment contains published APIs.	The environment contains published APIs.	This operation is not allowed.
403	APIG.3420	The API group is no longer available on the marketplace.	The API group is no longer available on the marketplace.	Check whether the API group has been listed on the marketplace.
403	APIG.3447	The Acl Strategy has already binded to APIs.	The Acl Strategy has already binded to APIs.	Delete the APIs bound with the access control policy and then delete the access control policy.
403	APIG.3451	The Throttle Strategy has already binded to APIs.	The Throttle Strategy has already binded to APIs.	Delete the APIs bound with the request throttling policy and then delete the request throttling policy.
403	APIG.3471	No permissions to perform operations on this type of VPC channel.	No permissions to perform operations on this type of VPC channel.	This operation is not allowed.
403	APIG.3472	The load balancer is already being used by another VPC channel.	The load balancer is already being used by another VPC channel.	Unbind the load balancer from the VPC channel.

Status Code	Error Codes	Error Message	Description	Solution
403	APIG.3473	The load balancer has already been bound to another endpoint service.	The load balancer has already been bound to another endpoint service.	This operation is not allowed.
403	APIG.3474	The API group ID in the URL does not match the API group to which the URL domain has been bound.	The API group ID in the URL does not match the API group to which the URL domain has been bound.	Change the API group specified in the URL to the API group associated with the domain name.
404	APIG.3001	The API group does not exist.	The API group does not exist.	Check whether the API group exists.
404	APIG.3002	The API does not exist.	The API does not exist.	Check whether the API exists.
404	APIG.3003	The environment does not exist.	The environment does not exist.	Check whether the environment exists.
404	APIG.3004	The app does not exist.	The app does not exist.	Check whether the app exists.
404	APIG.3005	The request throttling policy does not exist.	The request throttling policy does not exist.	Check whether the request throttling policy exists.
404	APIG.3006	The access control policy does not exist.	The access control policy does not exist.	Check whether the access control policy exists.
404	APIG.3007	The configuration does not exist.	The configuration does not exist.	Check whether the configuration exists.
404	APIG.3008	The excluded configuration does not exist.	The excluded configuration does not exist.	Check whether the excluded configuration exists.

Status Code	Error Codes	Error Message	Description	Solution
404	APIG.3009	The app authorization record does not exist.	The app authorization record does not exist.	Check whether the app authorization record exists.
404	APIG.3010	The access control policy binding record does not exist.	The access control policy binding record does not exist.	Check whether the access control policy binding record exists.
404	APIG.3011	The environment variable does not exist.	The environment variable does not exist.	Check whether the environment variable exists.
404	APIG.3012	The request throttling policy binding record does not exist.	The request throttling policy binding record does not exist.	Check whether the request throttling policy binding record exists.
404	APIG.3013	The excluded request throttling configuration does not exist.	The excluded request throttling configuration does not exist.	Check whether the excluded request throttling configuration exists.
404	APIG.3014	The pre-subscription record does not exist.	The pre-subscription record does not exist.	Check whether the purchasing record exists.
404	APIG.3015	The API publication record does not exist.	The API publication record does not exist.	Check whether the API publication record exists.
404	APIG.3016	The API group listing information does not exist.	The API group listing information does not exist.	Check whether the API group has been listed on the marketplace.
404	APIG.3017	The signature key does not exist.	The signature key does not exist.	Check whether the signature key exists.

Status Code	Error Codes	Error Message	Description	Solution
404	APIG.3018	The signature key binding record does not exist.	The signature key binding record does not exist.	Check whether the signature key binding record exists.
404	APIG.3019	The function URN does not exist.	The function URN does not exist.	Check whether the function URN exists.
404	APIG.3020	The URL domain does not exist.	The URL domain does not exist.	Check whether the domain name exists.
404	APIG.3021	The SSL certificate does not exist.	The SSL certificate does not exist.	Check whether the SSL certificate exists.
404	APIG.3022	The API version does not exist.	The API version does not exist.	Check whether the API version exists.
404	APIG.3023	The VPC channel does not exist.	The VPC channel does not exist.	Check whether the VPC channel exists.
404	APIG.3024	The instance does not exist.	The instance does not exist.	Check whether the cloud server exists in the VPC channel.
404	APIG.3025	The certificate does not exist.	The certificate does not exist.	Check whether the certificate exists.
404	APIG.3030	The instance does not exist	The instance does not exist	Check whether the instance exists.
404	APIG.3081	Authorizer not found	Authorizer not found	Check whether the custom authorizer exists.
404	APIG.3082	The APP code does not exist	The APP code does not exist	Check whether the AppCode exists.
404	APIG.3087	The feature configuration does not exist	The feature configuration does not exist	Check whether the feature configuration exists.

Status Code	Error Codes	Error Message	Description	Solution
404	APIG.3090	The Api swagger does not exist	The Api swagger does not exist	Check whether the Swagger file exists.
404	APIG.3092	The ECS does not exist	The ECS does not exist	The cloud server has already been deleted, or the server ID is incorrect.
409	APIG.3491	The default response can not be deleted.	The default response can not be deleted.	This operation is not allowed.
409	APIG.3492	The default response name can not be modified.	The default response name can not be modified.	This operation is not allowed.
412	APIG.3458	The feature is not supported by current instance	The feature is not supported by current instance	Contact technical support for assistance.
500	APIG.3500	Failed to synchronize data to etcd.	Failed to synchronize data to etcd.	Contact technical support for assistance.
500	APIG.9002	Invalid function URN.	Invalid function URN.	Use a valid function URN.
500	APIG.9003	Statistics Center request failed.	Statistics Center request failed.	Contact technical support for assistance.
500	APIG.9004	IAM request failed.	IAM request failed.	Contact technical support for assistance.
500	APIG.9005	VPC request failed.	VPC request failed.	Contact technical support for assistance.
500	APIG.9006	DNS request failed.	DNS request failed.	Contact technical support for assistance.
500	APIG.9007	ELB request failed.	ELB request failed.	Contact technical support for assistance.

Status Code	Error Codes	Error Message	Description	Solution
500	APIG.9008	Too many requests.	Too many requests.	Please try again later.
500	APIG.9999	System error.	System error.	Contact technical support for assistance.

A.5 Obtaining a Project ID

Calling an API

You can also obtain a project ID by calling the IAM API used to query project information.

The API used to obtain a project ID is "GET `https://{Endpoint}/v3/projects/`". `{Endpoint}` is the IAM endpoint and can be obtained from [Regions and Endpoints](#). For details on API calling authentication, see [Authentication](#).

The following is an example response. The value of `id` in the `projects` field is the project ID.

```
{
  "projects": [
    {
      "domain_id": "65382450e8f64ac0870cd180d14e684b",
      "is_domain": false,
      "parent_id": "65382450e8f64ac0870cd180d14e684b",
      "name": "xx-north-4",
      "description": "",
      "links": {
        "next": null,
        "previous": null,
        "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
      },
      "id": "a4a5d4098fb4474fa22cd05f897d6b99",
      "enabled": true
    }
  ],
  "links": {
    "next": null,
    "previous": null,
    "self": "https://www.example.com/v3/projects"
  }
}
```

Obtaining a Project ID on the Console

A project ID needs to be specified in the URLs of some APIs. Therefore, you need to obtain a project ID before calling such APIs. To obtain a project ID, perform the following operations:

1. Log in to the management console.
2. Hover the mouse pointer over the username and choose **My Credentials** from the drop-down list.

On the **My Credentials** page, view project IDs in the project list.
If there are multiple projects in one region, expand **Region** and view subproject IDs in the **Project ID** column.

A.6 Obtaining an Account Name and Account ID

An account name and account ID are required for some URLs when an API is called. To obtain an account name and account ID, perform the following operations:

1. Log in to the management console.
2. Click the username in the upper right corner and choose **My Credential** from the drop-down list.

View the account name and account ID.

B Change History

Table B-1 Change history

Released On	Description
2020-12-10	This issue is the first official release.