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Apsara Stack Enterprise

Developer Guide - Middleware
and Enterprise Applications

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Document conventions

Style	Description	Example
 Danger	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: Resetting will result in the loss of user configuration data.
 Warning	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 Warning: Restarting will cause business interruption. About 10 minutes are required to restart an instance.
 Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	 Notice: If the weight is set to 0, the server no longer receives new requests.
 Note	A note indicates supplemental instructions, best practices, tips, and other content.	 Note: You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click Settings> Network> Set network type .
Bold	Bold formatting is used for buttons, menus, page names, and other UI elements.	Click OK .
<code>Courier font</code>	Courier font is used for commands	Run the <code>cd /d C:/window</code> command to enter the Windows system folder.
<i>Italic</i>	Italic formatting is used for parameters and variables.	<code>bae log list --instanceid</code> <i>Instance_ID</i>
[] or [a b]	This format is used for an optional value, where only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	This format is used for a required value, where only one item can be selected.	<code>switch {active stand}</code>

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1.API Gateway

1.1. Overview

Welcome to use Alibaba Cloud API Gateway. You can use the APIs described in this document to perform relevant operations on API Gateway.

Terms

Term	Definition	Description
Region	Region	The region that you select to deploy an API. We recommend that you select the region to which your backend services belong.
API	Application Programming Interface	The API that you enter to deploy and provide external services or data.
Group	API group	A group of APIs. • API providers must create an API group before providing API services. • Each API group has one second-level domain and two runtime environments. • An independent domain that has been ICP filed and resolved to the second-level domain must be bound to the API group. • APIs in the same group can be accessed by using the bound independent domain.
SubDomain	Second-level domain	Each API group has a second-level domain. An independent domain must be resolved to the second-level domain, which can be accessed directly to call APIs in the test environment.
CustomDomain	Custom domain	An independent domain that you bind to an API group. Before you bind your domain name to an API group, add a CNAME record to resolve your domain name to the second-level domain and make sure that the bound independent domain is ICP filed or transferred for ICP filing at Alibaba Cloud. If the APIs in the group support HTTPS, upload an SSL certificate for the domain name.
Stage	Runtime environment	The runtime environment of an API group. Each API group that you create has two runtime environments: test and production. Only APIs that have been published to an environment can be called. When you access the second-level domain of an API group, APIs in the test environment are called by default.
Signature	Backend signature key	An authentication key issued by an API provider to API Gateway. The backend signature key takes effect immediately after it is bound to APIs. After receiving API requests, API Gateway sends the requests with signature information contained to your backend service. The backend service parses the signature information and authenticates API Gateway.

Term	Definition	Description
TrafficControl	Throttling policy	The throttling policy that is applied to APIs. The throttling policy takes effect immediately after it is bound to APIs. The policy is used to perform API-, app-, and user-level throttling on API calls. You can also configure special throttling policies. For example, when an app or a user calls an API that is bound with a special throttling policy, access to the API is controlled based on the special throttling value.
Special	Special throttling policy	Configured under a throttling policy. Special throttling policies are used to control the access to bound APIs for specified apps or users.
APP	App	The app that you create as an identity to call an API provided by another user. When API Gateway receives a request, it uses the AppKey and AppSecret to verify the signature.

1.2. List of operations by function

API group management

Operation	Description
CreateApiGroup	Creates an API group.
ModifyApiGroup	Modifies an API group.
DeleteApiGroup	Deletes an API group.
CreateApiStageVariable	Creates an environment variable.
DeleteApiStageVariable	Deletes an environment variable.
DescribeApiStage	Queries detailed information of a specified environment.
DescribeApiGroup	Queries detailed information of a specified API group.
DescribeApiGroups	Queries API groups.

Domain name management

Operation	Description
SetDomain	Binds a custom domain.
SetDomainCertificate	Uploads an SSL certificate for a specified custom domain.
DescribeDomain	Queries detailed information of a specified custom domain.

Operation	Description
DeleteDomain	Deletes a specified custom domain.
DeleteDomainCertificate	Deletes the certificate of a specified domain name.

API management

Operation	Description
CreateApi	Creates an API.
ModifyApi	Modifies an API.
DeployApi	Publishes an API to a specified environment.
SwitchApi	Switches the runtime definition of an API in a specified environment.
AbolishApi	Unpublishes an API in a specified environment.
DeleteApi	Deletes the definition of a specified API.
DescribeApi	Queries detailed information of a specified API definition.
DescribeApis	Queries the APIs that belong to a certain definition.
DescribeApiDoc	Queries the descriptive documentation of an API in a specified environment.
DescribeDeployedApi	Queries the runtime definition of an API in a specified environment.
DescribeDeployedApis	Queries the APIs that are running in a specified environment.
DescribeApiHistory	Queries the definition of an API in a specified earlier version.
DescribeApiHistories	Queries the earlier versions of a specified API.

Plugin management

Operation	Description
CreatePlugin	Creates a plugin.
ModifyPlugin	Modifies a plugin.
DeletePlugin	Deletes a plugin.
AttachPlugin	Binds a plugin to an API.

Operation	Description
DetachPlugin	Unbinds a plugin from an API.
DescribePluginApis	Queries the APIs to which a plugin is bound.
DescribePlugins	Queries plugins and their detailed information.
DescribePluginsByApi	Queries the plugins bound to an API.

App management

Operation	Description
CreateApp	Creates an app.
ModifyApp	Modifies an app.
ResetAppSecret	Resets the secret of a specified app.
DescribeAppAttributes	Queries apps and their basic information.
DescribeAppSecurity	Queries detailed information of a specified app key.
DeleteApp	Deletes an app.

Authorization

Operation	Description
DescribeApps	Queries the apps to which permissions can be granted.
DescribeAuthorizedApis	Queries the APIs that a specified app is authorized to call.
DescribeAuthorizedApps	Queries the apps that have access to a specified API.
SetApisAuthorities	Grants access permissions on multiple APIs to a specified app.
SetAppsAuthorities	Grants access permissions on a specified API to multiple apps.
RemoveApisAuthorities	Revokes the access permissions on multiple APIs from a specified app.
RemoveAppsAuthorities	Revokes the access permissions on a specified API from multiple apps.

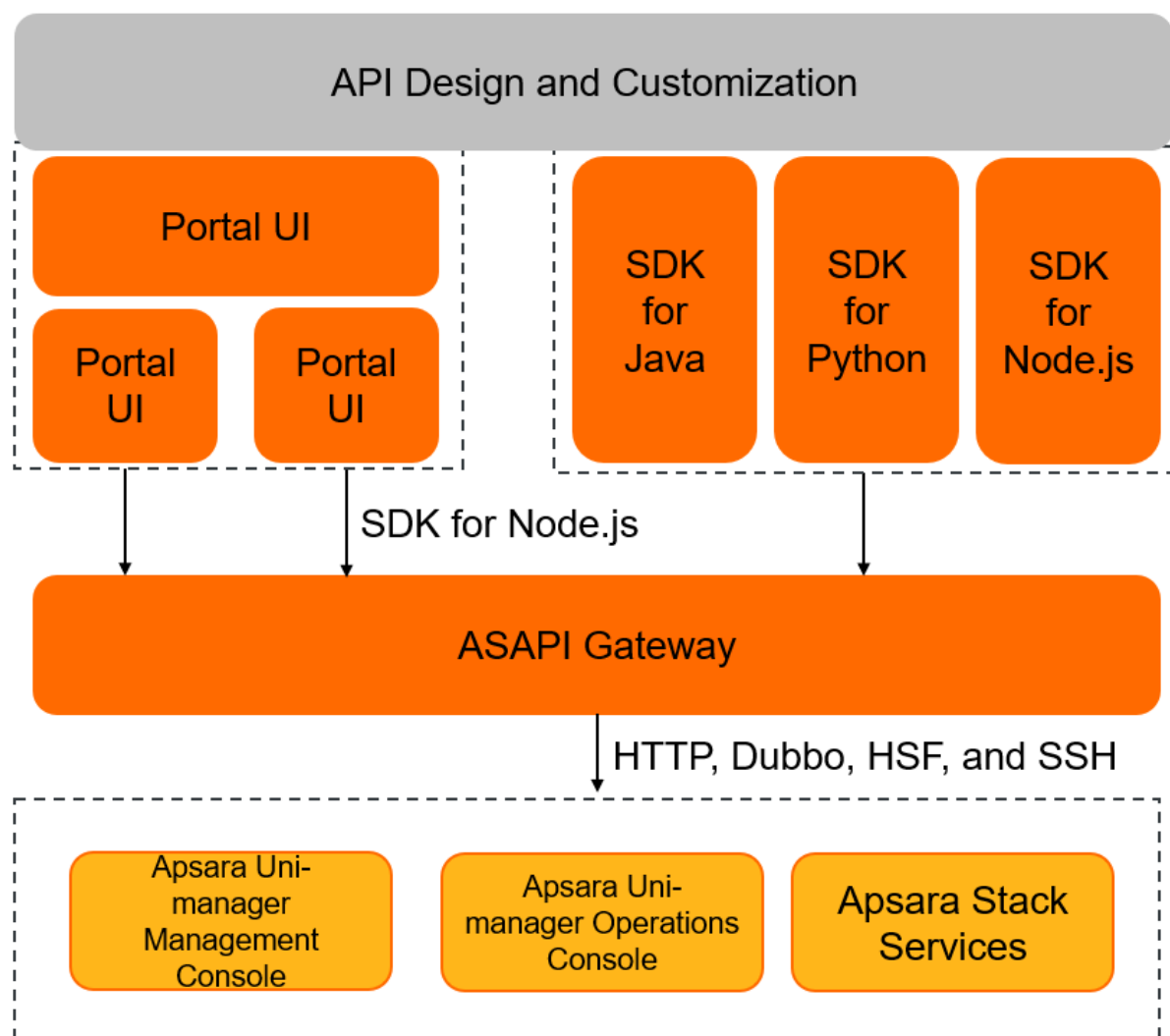
Other operations

Operation	Description
<code>DescribeRegions</code>	Queries supported regions.
<code>DescribeSystemParameters</code>	Queries system parameters.

1.3. ASAPI overview

This topic describes the architecture and features of the Apsara Stack API (ASAPI).

The ASAPI is a unified ingress gateway for Apsara Stack services and a main component of the Apsara Uni-manager Management Console. The ASAPI provides a unified method for you to manage and make API calls. You can use Apsara Stack SDK to centrally make API calls to Apsara Stack services, including Elastic Compute Service (ECS) and Virtual Private Cloud (VPC).



The ASAPI allows you to make API calls to manage and maintain Apsara Stack services.

- Make API calls to implement enterprise-grade management. For example, you can manage organizations, users, roles, resource sets, and logon policies. These operations are provided by the Apsara Uni-manager Management Console.

- Make API calls to manage operations. For example, you can manage quotas, usage statistics, specifications, and password policies. These operations are provided by the Apsara Uni-manager Management Console.
- Make API calls to manage resources. For example, you can create, delete, query, or modify cloud resources. These operations are provided by Apsara Stack services. If you call an API operation to create an ECS instance or a VPC, the API operation is provided by ECS or VPC.
- Make API calls to query monitoring metrics of Apsara Stack services. These operations are provided by the Apsara Uni-manager Management Console.
- Make API calls to perform O&M. For example, you can manage monitoring and alerting, inventories, tasks, and physical servers. These operations are provided by the Apsara Uni-manager Operations Console.

For more information, see the developer guide of the corresponding Apsara Stack service. For information about API operations used to manage organization users, see *Apsara Uni-manager Management Console Developer Guide*. For information about the API operation used to create an ECS instance, see *ECS Developer Guide*.

 **Note** If the "Use Apsara Stack SDK to make API calls" section is included in the developer guide of an Apsara Stack service, the ASAPI is supported by the Apsara Stack service. In this case, you can make API calls based on the developer guide.

1.4. Preparations

1.4.1. Log on to the API Tool console

You can log on to the API Tool console from the Apsara Uni-manager Management Console.

Prerequisites

- The URL of the Apsara Uni-manager Management Console is obtained from the deployment personnel before you log on to the Apsara Uni-manager Management Console.
- A browser is available. We recommend that you use the Google Chrome browser.

Procedure

1. In the address bar, enter the URL of the Apsara Uni-manager Management Console. Press the Enter key.
2. Enter your username and password.

Obtain the username and password that you can use to log on to the console from the operations administrator.

Note When you log on to the Apsara Uni-manager Management Console for the first time, you must change the password of your username. Your password must meet complexity requirements. The password must be 8 to 20 characters in length and must contain at least two of the following character types:

- Uppercase or lowercase letters
- Digits
- Special characters, which include ! @ # \$ %

3. Click **Login**.
4. In the top navigation bar, choose **Products > Others > API Tool**.

1.4.2. View information about API operations

This topic describes how to view information about API operations. Before you use SDKs, obtain service names, API operation names, and API operation versions.

Context

The API operations on the API Directory page are only for reference. For information about how to call API operations, see developer guides of the corresponding cloud services. If the information on the API Directory page is inconsistent with that in the developer guide of the corresponding cloud service, the information in the developer guide prevails.

Procedure

1. Go to the API Tool console. For more information, see [Log on to the API Tool console](#).
2. In the left-side navigation pane, click **API Directory**.
3. On the **API Directory** page, select the desired service from the drop-down list, enter a keyword of an API operation name in the search box, and then click the search icon.

API Directory		
All Products ▾	cre	🔍
Product Name	Operation Name	API Version
cr	CreateMetadataOccurrence	2018-12-01
cr	CreateUserInfo	2016-06-07
cr	CreateNamespaceAuthorization	2016-06-07
cr	CreateNamespace	2016-06-07

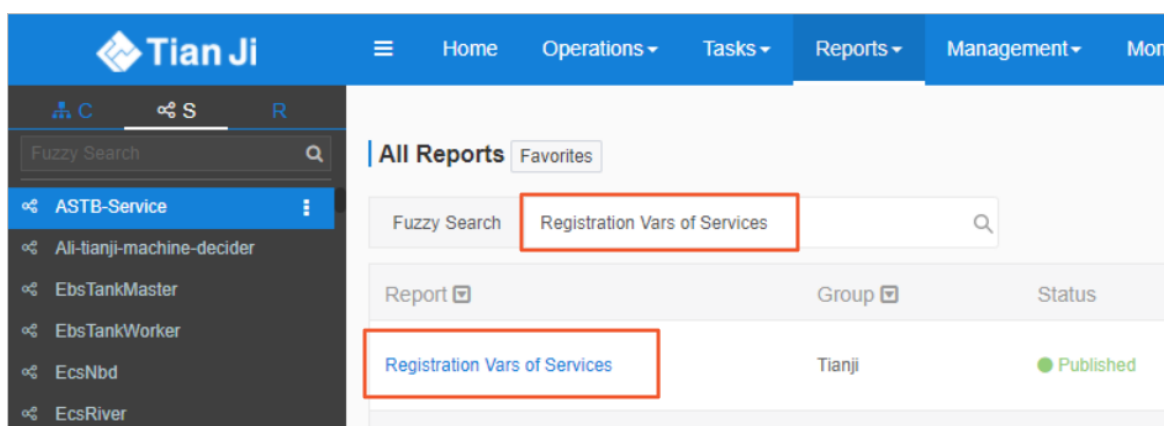
4. Then, you can view the service name, API operation name, and API operation version.

1.4.3. Generate an endpoint for the ASAPI

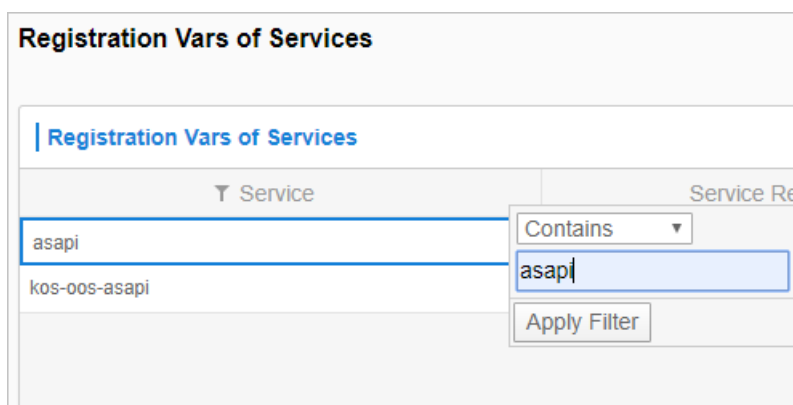
This topic describes three methods used to generate an endpoint for the Apsara Stack API (ASAPI).

Method 1: Use Registration Vars of Services to generate an endpoint

1. Log on to Apsara Infrastructure Management Framework.
 - i. Log on to the Apsara Uni-manager Operations Console.
 - ii. In the top navigation bar, click **O&M**.
 - iii. In the left-side navigation pane, choose **Product Management > Products**.
 - iv. In the Apsara Stack O&M section, click **Apsara Infrastructure Management Framework**.
2. In the left-side navigation pane, click **Reports**.
3. On the **All Reports** page, search for **Registration Vars of Services** and click the report name.



4. On the **Registration Vars of Services** page, click the  icon next to **Service** and search for **asapi**.



5. Find the **asapi** service, right-click in the **Service Registration** column, and then select **Show More** from the shortcut menu.

In the **Details** dialog box, obtain the value of **asapi.public.endpoint**.
6. Generate an endpoint for the ASAPI based on the following format:

```
https://<asapi.public.endpoint>/asapi/v3
```

Method 2: Use cluster resources to generate an endpoint

1. Log on to Apsara Infrastructure Management Framework.
 - i. Log on to the Apsara Uni-manager Operations Console.

- ii. In the top navigation bar, click **O&M**.
 - iii. In the left-side navigation pane, choose **Product Management > Products**.
 - iv. In the Apsara Stack O&M section, click **Apsara Infrastructure Management Framework**.
2. Go to the cluster operations page.
 - i. In the left-side navigation pane, choose **Operations > Cluster Operations**.
 - ii. In the **Cluster** search box, enter `ascm`.
 - iii. Find the cluster that you want to manage and click **Operations** in the **Actions** column.
3. Obtain the value of the domain parameter.
 - i. Click the **Cluster Resources** tab.
 - ii. In the **Name** field, search for `asapi_dns_public`.
 - iii. Click **Details** in the **Application Parameter** column.

In the **Application Parameter** message, obtain the value of the **domain** parameter.

```
{
  "domain": "public.asapi.*****.com",
  "ha_apply_type": "active-active",
  "name": "asapi_dns_public",
  "vip": "*****"
}
```

4. Generate an endpoint for the ASAPI based on the following format:

```
https://<domain>/asapi/v3
```

Method 3: Concatenate strings to generate an endpoint

You can also concatenate strings to generate an endpoint based on the following format:

```
https://public.asapi.<region>.<internet-domain>/asapi/v3
```

Note

1. Replace `<region>` with your actual region ID. For information about how to query a region ID, see [Query a region ID](#).
2. Replace `<internet-domain>` with the root domain of your Apsara Stack service. To obtain the root domain, contact Apsara Stack O&M personnel. Take note of this point: Use the internet-domain parameter instead of the intranet-domain parameter.

If the **region** value is `cn-****-****-d01` and the **internet-domain** value is `inter.****.****.com`, the following endpoint can be generated:

```
https://public.asapi.cn-****-****-d01.inter.****.****.com/asapi/v3
```

1.4.4. Obtain Apsara Stack SDKs

The Apsara Stack API (ASAPI) is a unified portal provided by Apsara Stack. You can use the ASAPI to connect to all Apsara Stack services. Apsara Stack provides SDKs for API calls.

For more information about how to obtain Apsara Stack SDKs, see [Apsara Stack documentation](#).

1.4.5. Obtain an AccessKey pair

An AccessKey pair that consists of an AccessKey ID and an AccessKey secret is used to implement symmetric encryption. This helps you verify the identity of a requester. The AccessKey ID is used to identify a user. The AccessKey secret is used to encrypt the signature string. This topic describes how to obtain an AccessKey pair.

Prerequisites

An account of the operations administrator or the level-1 organization administrator is obtained. Only an operations administrator or a level-1 organization administrator can obtain an AccessKey pair.

Context

If you need to make API calls to the Apsara Uni-manager Management Console or other Apsara Stack services, we recommend that you use the AccessKey pair of a personal account. If you use the AccessKey pair of a personal account, configure the request headers that are described in the following table for access control. Otherwise, an error that indicates insufficient permissions can occur.

Parameter	Description
x-acs-regionid	The ID of the region, for example, cn-hangzhou-*
x-acs-organizationid	The ID of the organization in the Apsara Uni-manager Management Console. For information about how to obtain an organization ID, see the "GetOrganizationList" section in Apsara Uni-manager Management Console Developer Guide.
x-acs-resourcegroupid	The ID of the resource set in the Apsara Uni-manager Management Console. For information about how to obtain a resource set ID, see the "ListResourceGroup" section in Apsara Uni-manager Management Console Developer Guide.
x-acs-instanceid	The ID of the instance to which you make API calls. If you need to make API calls to an Elastic Compute Service (ECS) instance, obtain the ID of the ECS instance on the Instances page.



Warning The AccessKey pair of a personal account is managed and controlled by the permission system of the Apsara Uni-manager Management Console. If you need to obtain the AccessKey pair of an account that has permissions on an organization, make sure that your operation is allowed by an administrator. This ensures security. The account that has permissions on an organization is a privileged account.

Obtain the AccessKey pair of a personal account

To obtain the AccessKey pair of a personal account, perform the following operations:

1. Log on to the Apsara Uni-manager Management Console.
2. In the upper-right corner of the homepage, move the pointer over the profile picture and click **User Information**.
3. In the **Apsara Stack AccessKey Pair** section, obtain the AccessKey pair.

Apsara Stack AccessKey Pair You must use the AccessKey pair when you access Apsara Stack resources.		
The AccessKey pair including the AccessKey ID and AccessKey secret is the credential for you to use Apsara Stack resources with full permissions. You must keep the AccessKey pair confidential.		
Region	AccessKey ID	AccessKey Secret
cn-  d01		Show

 **Note** The AccessKey pair that consists of an AccessKey ID and an AccessKey secret is the credential for you to have full permissions on Apsara Stack resources. Keep your AccessKey pair confidential.

Obtain the AccessKey pair of an account that has permissions on an organization

To obtain the AccessKey pair of an account that has permissions on an organization, perform the following operations:

1. Log on to the Apsara Uni-manager Management Console as an administrator.
2. In the top navigation bar, click **Enterprise**.
3. In the left-side navigation pane of the **Enterprise** page, click **Organizations**.
4. In the Organizations navigation tree, click the name of the organization that you want to manage.
5. On the right side of the page, click **Obtain AccessKey Pair**.
6. In the message that appears, obtain the AccessKey pair of the account that has permissions on the organization.

 **Note** The system automatically allocates an AccessKey pair to the account that has permissions on the level-1 organization. The same AccessKey pair is used by the accounts that have permissions on the subordinate organizations.

1.4.6. Query a region ID

When you use Apsara Stack SDK for Node.js to make API calls, specify a region ID. You can obtain a region ID in the Apsara Uni-manager Management Console.

Procedure

1. Log on to the Apsara Uni-manager Management Console as an administrator.
2. In the upper-right corner of the homepage, move the pointer over the profile picture and click **User Information**.
3. In the **Apsara Stack AccessKey Pair** section, view the region ID.

Apsara Stack AccessKey Pair You must use the AccessKey pair when you access Apsara Stack resources.

The AccessKey pair including the AccessKey ID and AccessKey secret is the credential to for you to use Apsara Stack resources with full permissions. You must keep the AccessKey pair confidential.

Region	AccessKey ID	AccessKey Secret
cn-  d01		 Show

1.5. Common parameters

Common request parameters must be included in all API requests.

Sample common parameters

The following table describes the common parameters that are used when you call API operations supported by the Apsara Stack API (ASAPI).

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. For more information, see View information about API operations .
Product	String	Yes	The name of the service.
Version	String	Yes	The version of the API operation. For more information, see View information about API operations .
RegionId	String	Yes	The ID of the region. For more information, see Query a region ID .
AccessKeyId	String	Yes	The AccessKey ID used to connect to the service. For more information, see Obtain an AccessKey pair .
Signature	String	Yes	The signature string of the current request. For more information about how signatures are calculated, see Request signatures.

Parameter	Type	Required	Description
SignatureMethod	String	Yes	The encryption method of the signature string. Valid values: HMAC-SHA1 and HMAC-SHA256.
SignatureVersion	String	Yes	The version of the signature encryption algorithm. Valid values: 1.0 and 2.0.
SignatureNonce	String	Yes	A unique, random number used to prevent replay attacks. You must use different numbers for different requests.
Timestamp	String	Yes	The timestamp of the request. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. Sample value: 2018-01-01T12:00:00Z.
Format	String	Yes	The format in which to return the response. Set the value to JSON.

Note

The `Signature`, `SignatureMethod`, `SignatureVersion`, `SignatureNonce`, `Timestamp`, and `Format` parameters are encapsulated into Apsara Stack SDK. You do not need to configure these parameters.

1.6. SDK description

1.6.1. Use Apsara Stack SDK for Java to call API operations

This topic describes how to obtain and use Apsara Stack SDK for Java to call API operations.

Prerequisites

- An authorized account and an AccessKey pair are obtained. The AccessKey pair consists of an AccessKey ID and an AccessKey secret. For more information about how to obtain an AccessKey pair in the Apsara Uni-manager Management Console, see [Obtain an AccessKey pair](#).
- The endpoint of the Apsara Stack API (ASAPI) is obtained. For more information, see [Generate an endpoint for the ASAPI](#).
- Apsara Stack SDK for Java 1.8 or later is installed.

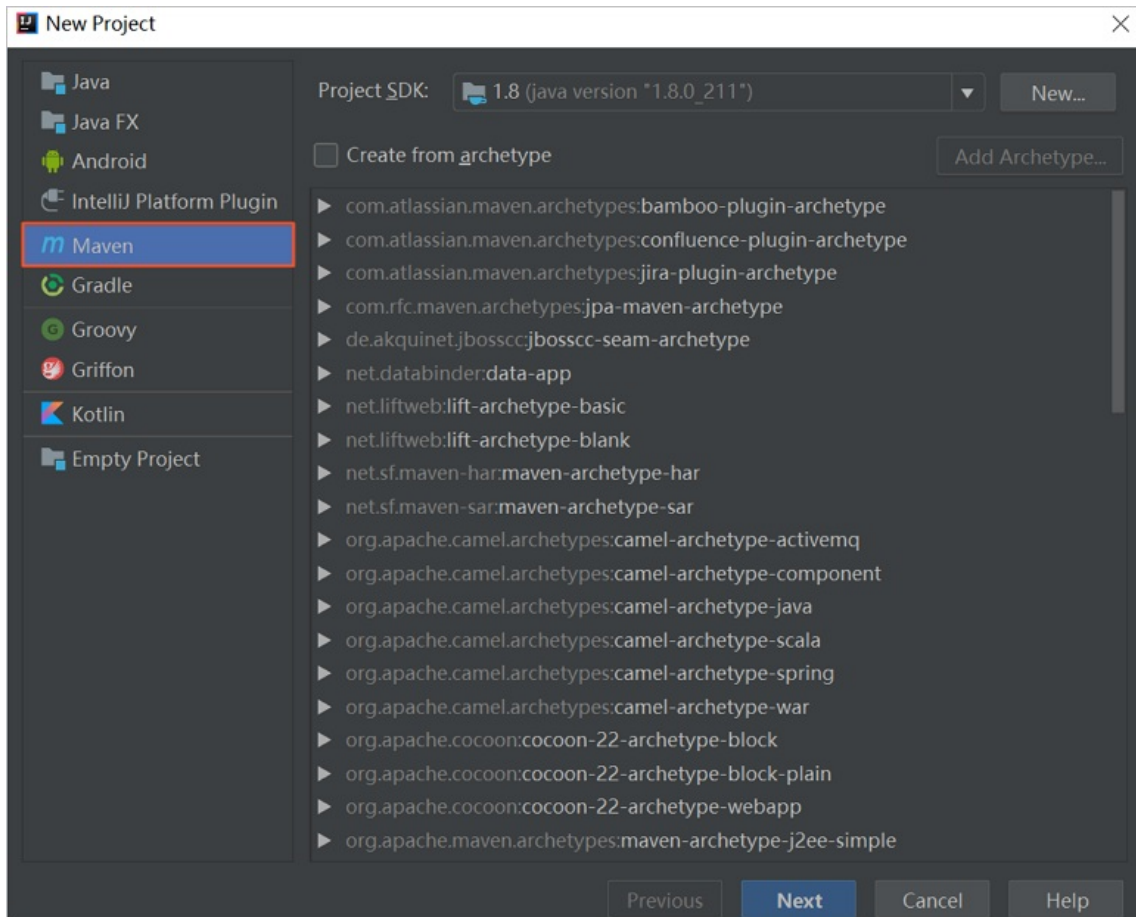
Background information

The help center of Apsara Stack provides Maven dependencies and JAR files for Apsara Stack SDK for Java. You can write code to use Apsara Stack SDK for Java to call API operations.

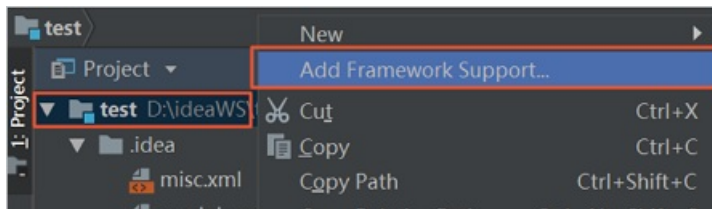
In this example, the Windows 10 64-bit OS and IntelliJ IDEA are used.

Procedure

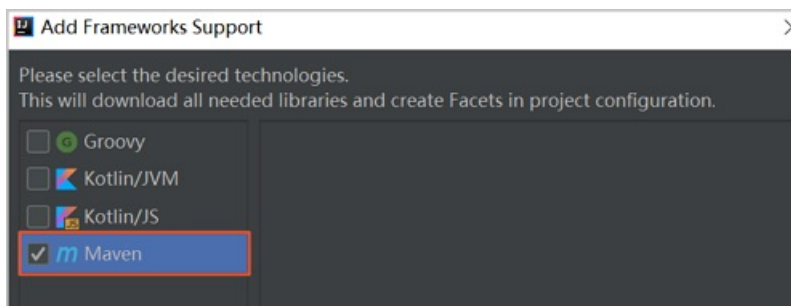
1. Use one of the following methods to configure Maven in IntelliJ IDEA. Maven is a tool used for project management.
 - Use Maven that is integrated in IntelliJ IDEA.
 - Download Maven based on the OS that you are using from the official website and configure Maven. For more information, see [Download Maven](#).
2. Obtain the Maven dependencies for Apsara Stack SDK for Java from the official website. For more information about how to obtain the dependencies, see [Obtain the core package for ASAPI](#).
3. Use one of the following methods to create a Maven project:
 - Method 1: Create a Maven project in IntelliJ IDEA.



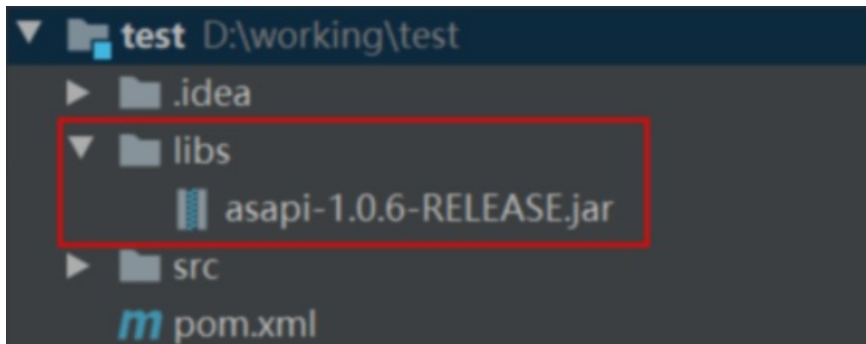
- o Method 2: Convert an existing project to a Maven project.
 - a. Right-click the project that you want to convert and select **Add Framework Support....**



- b. Select **Maven** and click **OK**.



4. Create a folder named **libs** in the root directory of the project. Then, add the JAR file of Apsara Stack SDK for Java to the **libs** folder, as shown in the following figure.



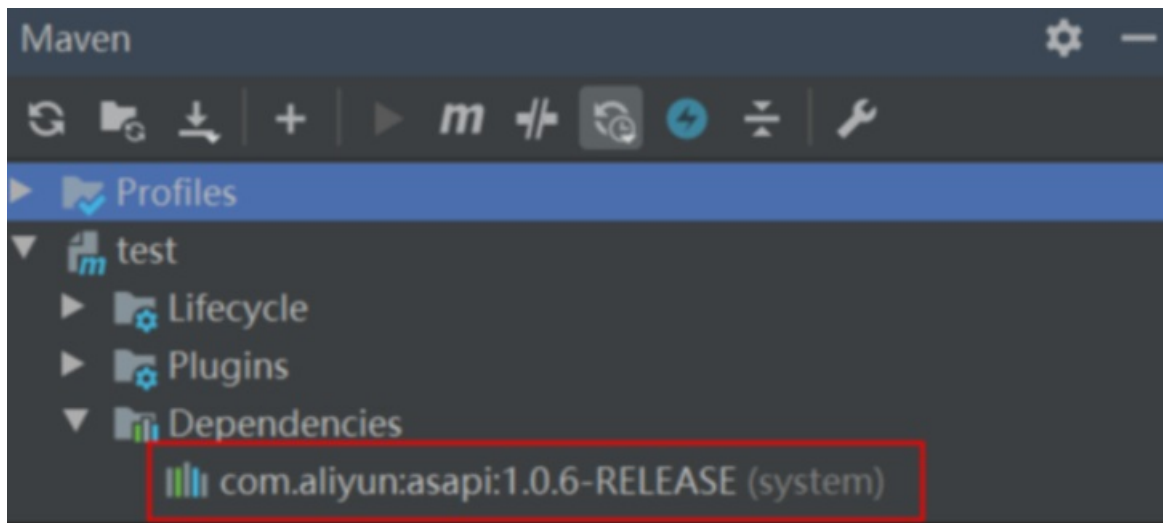
5. Add the dependencies of Apsara Stack SDK for Java to the pom.xml file in the project directory.

```
<dependencies>
  <dependency>
    <groupId>com.aliyun</groupId>
    <artifactId>asapi</artifactId>
    <version>1.0.6-RELEASE</version>
    <scope>system</scope>
    <systemPath>${project.basedir}/libs/asapi-1.0.6-RELEASE.jar</systemPath>
  </dependency>
  <dependency>
    <groupId>com.alibaba</groupId>
    <artifactId>alicrypto-java-aliyun</artifactId>
    <version>1.0.4</version>
    <systemPath>${project.basedir}/libs/alicrypto-java-aliyun-1.0.4.jar</systemPath>
  </dependency>
  <dependency>
    <groupId>com.aliyun</groupId>
    <artifactId>gmsse</artifactId>
    <version>1.1.0</version>
    <systemPath>${project.basedir}/libs/gmsse-1.1.0.jar</systemPath>
  </dependency>
</dependencies>
```

 **Note** Replace `1.0.6-RELEASE` with the actual version of Apsara Stack SDK for Java.

6. On the right side of IntelliJ IDEA, view information in the Maven section.

If the information in the following figure appears, the dependencies are added.



Use Apsara Stack SDK for Java

You can use the GET or POST method to call API operations provided by the ASAPI. The following sample code shows how to call API operations:

```
// 1. Create a connection to an ASClient object.
ASClient client = new ASClient();
// 2. Configure the identifier of the requester. This parameter is required and used only for identification. You can set this parameter to a random value.
client.setSdkSource("<The identifier of the requester>");
Map<String, Object> parameters = new HashMap<String, Object>();
// 3. Configure the parameters for authorization. The parameter values vary based on your environment.
// The AccessKey ID of your Apsara Stack tenant account.
parameters.put("AccessKeyId", "<AccessKey ID>");
// The AccessKey secret of your Apsara Stack tenant account.
parameters.put("AccessKeySecret", "<AccessKey Secret>");
// The ID of the region.
parameters.put("RegionId", "<your RegionID>");
// 4. Configure parameters for an API call. In this example, the Product, Action, and Version parameters are configured.
parameters.put("Product", "<The name of the service>");
parameters.put("Action", "<The name of the API operation>");
parameters.put("Version", "<The version of the API operation>");
// 5. Configure operation-specific parameters.
parameters.put("<The name of the operation-specific parameter>", "<The value of the operation-specific parameter>");
// 6. Configure request headers and the encryption method for the signature string. Valid values of the SignatureMethod parameter: HMAC-SHA1 and HMAC-SHA256. By default, HMAC-SHA256 is used.
Map<String, String> headers = new HashMap<String, String>();
//headers.put("SignatureMethod", "HMAC-SHA1");
headers.put("x-acs-regionid", "<your-regionid>");
headers.put("x-acs-resourcegroupid", "<your-resourcegroupid>");
headers.put("x-acs-organizationid", "<your-organizationid>");
headers.put("x-acs-instanceid", "<your-instanceid>");
// 7. Make an API call. We recommend that you use the doPost() method.
// Configure the time-out period for a connection.
//client.setConnectTimeout(10000);
// Configure the time-out period for a request.
// client.setSocketTimeout(10000);
String result = client.doPost(endpoint, headers, parameters);
System.out.println(result);
```

Configure a proxy

If you need to use a proxy to make API calls, use the following sample code to configure the proxy:

```
Cloud cloud = new Cloud();
// Configure the IP address of the proxy.
cloud.setConfig("proxy_host", "<IP>");
// Configure the port used by the proxy.
cloud.setConfig("proxy_port", "<Port>");
// 1. Create a connection to an ASClient object.
ASClient client = new ASClient(cloud);
```

Request headers

Parameter	Description
x-acs-regionid	The ID of the region. For more information about how to obtain a region ID, see Query the region ID .
x-acs-organizationid	The ID of the organization in the Apsara Uni-manager Management Console.
x-acs-resourcegroupid	The ID of the resource set in the Apsara Uni-manager Management Console.
x-acs-instanceid	The ID of the instance to which you make API calls.

1.6.2. Use Apsara Stack SDK for Python to call API operations

This topic describes how to use Apsara Stack SDK for Python to call API operations provided by the Apsara Stack API (ASAPI).

Preparations

- An authorized account and an AccessKey pair are obtained. The AccessKey pair consists of an AccessKey ID and an AccessKey secret. For more information about how to obtain an AccessKey pair in the Apsara Uni-manager Management Console, see [Obtain an AccessKey pair](#).
- The endpoint of the ASAPI is obtained. For more information, see [Generate an endpoint for the ASAPI](#).

Install Apsara Stack SDK for Python

1. Download the required version of Apsara Stack SDK for Python. For more information, see [Obtain Apsara Stack SDKs](#).
2. Upload the compressed file of Apsara Stack SDK for Python to the host from which you want to send API requests and extract the file. Then, run the following code in the directory of the extracted files to install Apsara Stack SDK for Python:

```
# Install Apsara Stack SDK for Python 2.x.  
pip install aliyun-python2-sdk-asapi-2.4.7.tar.gz  
# Install Apsara Stack SDK for Python 3.x.  
pip3 install aliyun-python3-sdk-asapi-2.4.7.tar.gz
```

Note

Replace `2.4.7` with the actual version of Apsara Stack SDK for Python.

Sample requests

You can use the GET or POST method to call API operations provided by the ASAPI.

```
# 1. Import dependencies.
from aliyunsdkasapi.ASClient import ASClient
from aliyunsdkasapi.AsapiRequest import AsapiRequest

if __name__ == '__main__':
    # 2. Create a request. The Product parameter specifies the name of the service. The Version parameter specifies the version of the API operation. The Action parameter specifies the operation that you want to perform. The asapi-endpoint parameter specifies the endpoint of the ASAPI.
    req = AsapiRequest("<Product>", "<Version>", "<Action>", "<asapi-endpoint>")
    # 3. Configure operation-specific parameters.
    req.add_body_params("<key>", "<value>")
    # 4. Configure request headers.
    req.add_header("x-acs-resourcegroupid", "<your-resourcegroupid>");
    req.add_header("x-acs-organizationid", "<your-organizationid>");
    req.add_header("x-acs-regionid", "<your-regionid>");
    req.add_header("x-acs-instanceid", "<your-instanceid>");
    # 5. Configure a request method.
    req.set_method("POST")
    # 6. Configure initialization parameters for an ASClient object. The parameter values vary based on your environment. The timeout parameter specifies the time-out period for a request. The cert_file parameter specifies the certificate. The verify parameter specifies whether to verify the certificate.
    as_client = ASClient("<accesskeyid>", "<accesskeysecret>", "<regionid>", timeout=1000,
        cert_file=None,
        verify=False)
    # Configure the identifier of the requester. This parameter is required and used only for identification. You can set this parameter to a random value.
    as_client.setSdkSource("<The identifier of the requester>")
    response = as_client.do_request(req)
    print(response)
```

Request headers

Parameter	Description
x-acs-resourcegroupid	The ID of the resource set in the Apsara Uni-manager Management Console.
x-acs-organizationid	The ID of the organization in the Apsara Uni-manager Management Console.
x-acs-regionid	The ID of the region. For more information about how to obtain a region ID, see Query a region ID .
x-acs-instanceid	The ID of the instance to which you make API calls.

Configure a proxy

Perform the following steps to configure a proxy:

1. Import OS dependencies.

```
import os
```

2. Configure one or more proxies.

```
# Before you make an API call, configure one or more proxies.  
os.environ['http_proxy'] = "http://x.x.x.x:xxxx"  
os.environ['https_proxy'] = "https://x.x.x.x:xxxx"
```

1.6.3. Use Apsara Stack SDK for Node.js to call API operations

This topic describes how to obtain and use Apsara Stack SDK for Node.js to call API operations.

Preparations

- An authorized account and an AccessKey pair are obtained. The AccessKey pair consists of an AccessKey ID and an AccessKey secret. For more information about how to obtain an AccessKey pair in the Apsara Uni-manager Management Console, see [Obtain an AccessKey pair](#).
- The endpoint of the Apsara Stack API (ASAPI) is obtained. For more information, see [Generate an endpoint for the ASAPI](#).
- A region ID is obtained. For more information about how to obtain a region ID, see [Query the region ID](#).

Add dependencies

Run the following command to install Apsara Stack SDK for Node.js:

```
tnpm install --save @ali/asapi-nodejs-sdk
```

Use Apsara Stack SDK for Node.js

The following sample code shows how to use Apsara Stack SDK for Node.js to make API calls:

```
// 1. Import the dependencies of Apsara Stack SDK for Node.js.
const Controller = require('egg').Controller;
const ASAPIClient = require('@ali/asapi-nodejs-sdk');
// 2. Configure the parameters.
const cnofig = {
  API_GATEWAY: '<The endpoint of the ASAPI>',
  regionId: '<The ID of the region in which the Apsara Stack service is deployed>',
  accessKeyId: '<The AccessKey ID of your Apsara Stack tenant account>',
  accessKeySecret: '<The AccessKey secret of your Apsara Stack tenant account>'
};
// 3. Initialize a client for API calls.
const AsapiClient = new ASAPIClient(cnofig, this.ctx);
// 4. Configure request parameters.
const params = {
  "Action": "<The name of the API operation>",
  "Product": "<The name of the service that provides the API operation>",
  "Version": "<The version of the API operation>",
  "regionId": '<The ID of the region in which the Apsara Stack service is deployed>',
  "<The name of the operation-specific parameter required by the API operation>": "<The value of the operation-specific parameter>"
}
// 5. Configure request headers.
AsapiClient.addHeader('x-acs-caller-sdk-source', '<The identifier of the requester>')
AsapiClient.addHeader('x-acs-roleid', '<The ID of the role>')
AsapiClient.addHeader('x-acs-userid', '<The ID of the user>')
AsapiClient.addHeader('x-acs-organizationid', '<your-organizationid>')
AsapiClient.addHeader('x-acs-regionid', '<your-regionid>');
AsapiClient.addHeader('x-acs-resourcegroupid', '<your-resourcegroupid>');
AsapiClient.addHeader('x-acs-instanceid', '<your-instanceid>');
// 6. Make an API call and obtain the response.
try {
  const res = await AsapiClient.doRequest(cnofig.API_GATEWAY, params, {
    method: 'POST', // The request method.
    formatParams: false, // Specifies whether to format parameters and capitalize the first letter of each parameter.
    enableProxy: true, // Specifies whether to configure a proxy.
    proxy: 'http://x.x.x.x:xxxx',
    timeout: 10000, // The time-out period.
    // ca: , // The certificate issued by a certificate authority (CA). For more information, visit https://nodejs.org/api/https.html#https_https_request_options_callback.
  })
  console.log(res)
} catch (e) {
  console.log(e)
}
```

Disable certificate validation

The following sample code shows how to disable certificate validation:

```
Configure the environment variable.
NODE_TLS_REJECT_UNAUTHORIZED=0
```

Request headers

Parameter	Description
x-acs-regionid	The ID of the region. For more information about how to obtain a region ID, see Query the region ID .
x-acs-organizationid	The ID of the organization in the Apsara Uni-manager Management Console.
x-acs-resourcegroupid	The ID of the resource set in the Apsara Uni-manager Management Console.
x-acs-instanceid	The ID of the instance to which you make API calls.
x-acs-caller-sdk-source	The custom name of the requester or the system. This parameter is used to identify the source of the API request.
x-acs-roleid	The ID of the role.
x-acs-userid	The ID of the user.

1.6.4. SDK for POP

1.6.4.1. SDK for Java

Before you use Apsara Stack API (ASAPI) SDK for POP for Java to access ASAPI, you must know the remote procedure call (RPC) and resource-oriented architecture (ROA) styles that are supported for API calls. ASAPI is compatible with both styles. Their difference lies in the ASAPI endpoints that are used for API calls.

Prerequisites

- An [Alibaba Cloud SDK](#) package is downloaded for the service that you want to access. The required dependencies are installed.
- SSL certificate validation is ignored for requests over HTTPS.

Background information

ASAPI supports only the HTTPS request protocol.

Difference between two styles

When you use the RPC or ROA style to make API calls, take note that the two styles use different ASAPI endpoints.

```
# ASAPI endpoint for the RPC style:
public.asapi.<global:region>.<global:internet-domain>/asapi/v3
# ASAPI endpoint for the ROA style:
public.asapi.<global:region>.<global:internet-domain>/asapi/v3/roa
```

Call examples

The following sample code provides an example on how to use the RPC style to make an API call. In this example, the DescribeInstances operation of Elastic Compute Service (ECS) is called, and the API version is 2014-05-26.

Sample code:

```
package com.aliyuncs.client.pop.ecs;

import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.ecs.model.v20140526.DescribeInstancesRequest;
import com.aliyuncs.ecs.model.v20140526.DescribeInstancesResponse;
import com.aliyuncs.http.HttpClientConfig;
import com.aliyuncs.http.ProtocolType;
import com.aliyuncs.profile.DefaultProfile;

import java.util.List;

public class DescribeInstancesTest {
    public static void main(String[] args) {
        // Specify the endpoint of ASAPI.
        String endpoint = "public.asapi.<global:region>.<global:internet-domain>/asapi/v3";
        // Specify the region where the ECS service resides.
        String region = "<global:region>";
        // Specify the name of the service that you want to access.
        String product = "ECS";
        // Specify your AccessKey pair.
        String ak = "<accessKeyId>";
        String sk = "<accessKeySecret>";
        try {
            DefaultProfile clientProfile = DefaultProfile.getProfile(region, ak, sk);
            // Ignore SSL certificate validation.
            HttpClientConfig clientConfig = HttpClientConfig.getDefault();
            clientConfig.setIgnoreSSLCerts(true);
            // Set the connection timeout period.
            clientConfig.setConnectionTimeoutMillis(3000L);
            // Set the read timeout period.
            clientConfig.setReadTimeoutMillis(10000L);
            clientProfile.setHttpClientConfig(clientConfig);
            // Create a connection.
            DefaultAcsClient acsClient = new DefaultAcsClient(clientProfile);
            // Create a request.
            DescribeInstancesRequest request = new DescribeInstancesRequest();
            // Specify the endpoint of ASAPI.
            request.setSysEndpoint(endpoint);
            // Specify the name of the service that you want to access and the region where the service resides.
            request.setSysLocationProduct(product);
            request.setSysRegionId(region);
            // Set the request protocol to HTTPS.
            request.setSysProtocol(ProtocolType.HTTPS);
            DescribeInstancesResponse result = acsClient.getAcsResponse(request);
            List<DescribeInstancesResponse.Instance> instances = result.getInstances();
            for (DescribeInstancesResponse.Instance instance: instances) {
                System.out.println(instance.getInstanceId());
            }
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```



```

        System.out.println(instance.getInstanceName());
    }

    } catch (Exception e) {
        e.printStackTrace();
    }
}
}

```

The following sample code provides an example on how to use the ROA style to make an API call. In this example, the GetNamespaceList operation of Container Registry is called, and the API version is 2016-06-07.

Sample code:

```

package com.aliyuncs.client.pop.cr;

import com.aliyuncs.CommonRequest;
import com.aliyuncs.CommonResponse;
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.http.FormatType;
import com.aliyuncs.http.HttpClientConfig;
import com.aliyuncs.http.MethodType;
import com.aliyuncs.http.ProtocolType;
import com.aliyuncs.profile.DefaultProfile;

public class GetNamespaceListTest {
    public static void main(String[] args) {
        // Specify the endpoint of ASAPI.
        String endpoint = "public.asapi.<global:region>.<global:internet-domain>/asapi/v3/roa";
        // Specify the region where the Container Registry service resides.
        String region = "<global:region>";
        // Specify the name of the service that you want to access.
        String product = "cr";
        // Specify your AccessKey pair.
        String ak = "<accessKeyId>";
        String sk = "<accessKeySecret>";
        DefaultProfile profile = DefaultProfile.getProfile(region, ak, sk);
        // Ignore SSL certificate validation.
        HttpClientConfig clientConfig = HttpClientConfig.getDefault();
        clientConfig.setIgnoreSSLCerts(true);
        // Set the connection timeout period.
        clientConfig.setConnectionTimeoutMillis(3000L);
        // Set the read timeout period.
        clientConfig.setReadTimeoutMillis(10000L);
        profile.setHttpClientConfig(clientConfig);
        // Create a connection for the client.
        IAcsClient client = new DefaultAcsClient(profile);
        // Create a request.
        CommonRequest request = new CommonRequest();
        // Set the request protocol to HTTPS.
    }
}

```

```
request.setSysProtocol(ProtocolType.HTTPS);
// Specify the request method.
request.setSysMethod(MethodType.GET);
// Specify the endpoint of ASAPI.
request.setSysDomain(endpoint);
// Specify the version of the API.
request.setSysVersion("2016-06-07");
// Specify the pattern of the uniform resource identifier (URI).
request.setSysUriPattern("/namespace");
// Specify the name of the service that you want to access and the region where the service resides.
request.setSysLocationProduct(product);

request.putHeadParameter("Content-Type", "application/json");
String requestBody = "{}";
request.setHttpContent(requestBody.getBytes(), "utf-8", FormatType.JSON);
try {
    CommonResponse response = client.getCommonResponse(request);
    System.out.println(response.getData());
} catch (ServerException e) {
    e.printStackTrace();
} catch (ClientException e) {
    e.printStackTrace();
}
}
```

Notice

If you send a request over HTTPS, you must enable the request to ignore SSL certificate validation.

1.6.4.2. SDK for Go

This topic describes how to use Apsara Stack API (ASAPI) SDK for POP for Go.

Prerequisites

An [Alibaba Cloud SDK](#) package is downloaded for the service that you want to access. The required dependencies are installed.

Background information

Only the remote procedure call (RPC) style is supported for API calls.

Call examples

The following sample code provides an example on how to make an API call. In this example, the DescribeInstances operation of Elastic Compute Service (ECS) is called, and the API version is 2014-05-26.

Sample code:

```

package main

import (
    "fmt"
    "time"

    "github.com/aliyun/alibaba-cloud-sdk-go/sdk"
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk/auth/credentials"
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk/requests"
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk/responses"
)

func getSdkConfig() *sdk.Config {
    return sdk.NewConfig().
        WithTimeout(time.Duration(30) * time.Second).
        WithEnableAsync(true).
        WithGoRoutinePoolSize(100).
        WithMaxTaskQueueSize(10000).
        WithDebug(false).
        WithScheme("HTTP")
}

func main(){
    ak := "<The AccessKey ID of your Apsara Stack tenant account.>"
    sk := "<The AccessKey secret of your Apsara Stack tenant account.>"
    regionId := "<The region where the ECS service resides.>"
    endpoint := "<The endpoint of ASAPI.>" // No network protocol.
    request := requests.NewCommonRequest()
    request.SetReadTimeout(10 * time.Second) // Set the read timeout period of the request to 10 seconds.
    request.SetConnectTimeout(5 * time.Second) // Set the connection timeout period of the request to 5 seconds.
    request.Method = requests.GET
    request.Domain = endpoint // Location Service will not be enabled if the host is specified. For example, the service with a certification type-bearer token must be specified.
    request.Version = "2014-05-26" // Specify the version of the API.
    request.Scheme = "https" // Specify the request protocol. Default value: http.
    request.ApiName = "DescribeInstances"
    request.QueryParams["Product"] = "Ecs" // Specify the name of the service that you want to access.
    request.TransToAcsRequest()
    client, err := sdk.NewClientWithOptions(regionId, getSdkConfig(), credentials.NewAccessKeyCredential(ak, sk))
    // If relevant parameters are not set for the request, the client settings are used.
    //client.SetReadTimeout(10 * time.Second) // Set the read timeout period of the client to 10 seconds.
    //client.SetConnectTimeout(5 * time.Second) // Set the connection timeout period of the client to 5 seconds.
    resp := responses.BaseResponse{}
    err = client.DoAction(request, &resp)
    if err != nil {
        panic(err)
    }
    fmt.Print(endpoint)
}

```

Configure proxies

You can configure proxies in one of the following ways:

- Configure proxies by using environment variables.

Set the HTTP_PROXY and HTTPS_PROXY environment variables, or set the NO_PROXY environment variable.

Sample code:

```
import (
    "os"
)
func main(){
    os.Setenv("HTTP_PROXY", "http://x.x.x.x:xxxx") // Set the HTTP_PROXY environment variable.
    os.Setenv("HTTPS_PROXY", "https://x.x.x.x:xxxx") // Set the HTTPS_PROXY environment variable.
}
```

- Configure proxies on the client.

Sample code:

```
// The proxies that are configured on the client take precedence over those that are configured by using environment variables.
client.SetHttpProxy("http://x.x.x.x:xxxx") // Configure the HTTP proxy.
client.GetHttpProxy() // Query the HTTP proxy.

client.SetHttpsProxy("https://x.x.x.x:xxxx") // Configure the HTTPS proxy.
client.GetHttpsProxy() // Query the HTTPS proxy.

client.SetNoProxy("127.0.0.1,localhost") // Configure the proxy whitelist.
client.GetNoProxy() // Query the proxy whitelist.
```

1.6.4.3. SDK for Python

This topic describes how to use Apsara Stack API (ASAPI) SDK for POP for Python.

Prerequisites

An [Alibaba Cloud SDK](#) package is downloaded for the service that you want to access. The required dependencies are installed.

Background information

Only the remote procedure call (RPC) style is supported for API calls.

Call examples

The following sample code provides an example on how to make an API call. In this example, the DescribeInstances operation of Elastic Compute Service (ECS) is called, and the API version is 2014-05-26.

Sample code:

```

from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkecs.request.v20140526 import DescribeInstancesRequest
import os

# Create an AcsClient instance.
client = AcsClient(
    "<your-access-key-id>",
    "<your-access-key-secret>",
    "<your-region-id>",

    timeout=1000, # Set the timeout period.
    verify=False, # Ignore certificate validation. or verify='<The location where the certificate is stored.>'
);
# Set the following parameters for the HTTPS request protocol:
# client.set_verify(False)
# os.environ["HTTPS_PROXY"] = "http://127.0.0.1:8080"

# os.environ["HTTP_PROXY"] = "http://127.0.0.1:8080"
def hello_ecs_instance():
    # Create a request and set the parameters.
    request = DescribeInstancesRequest.DescribeInstancesRequest()

    params = {"PageNumber": "1", "Product": "Ecs", "Version": "2014-05-26", "Action": "DescribeInstances"};
    request.set_body_params(params)
    # The endpoint that contains no network protocol is in the following format: ASAPI domain name/asapi/v3
    request.set_endpoint('<The endpoint of ASAPI.>')
    # Set the following parameter if the endpoint contains no network protocol:
    request.set_protocol_type("https")

    request.set_PageSize(10)
    # Initiate the API request and obtain the response.
    response = client.do_action_with_exception(request)
    print(response)

if __name__ == '__main__':
    print("Hello Aliyun OpenApi!")
    hello_ecs_instance()

```

Configure proxies

Set the HTTP_PROXY and HTTPS_PROXY environment variables.

Sample code:

```

# Configure the HTTPS proxy.
os.environ["HTTPS_PROXY"] = "http://x.x.x.x:xxxx"

# Configure the HTTP proxy.
os.environ["HTTP_PROXY"] = "https://x.x.x.x:xxxx"

```

1.7. HTTP requests

1.7.1. Overview

This topic describes how to make API requests and is intended for users who use API URLs to initiate HTTP GET requests.

If you are using an SDK to initiate requests, you can skip this topic.

The request URL consists of different parameters and has a fixed syntax. The URL contains common request parameters, your signature, and operation-specific parameters. Sample request URLs are provided for each API operation. These URLs are not encoded to make them easy to read. Before you make a request, you must encode the request URL. After the authentication process is complete based on your signature, the results are returned to you. Response parameters are returned if the call is successful, whereas an error message is returned if the call fails. You can troubleshoot issues based on the error message.

1.7.2. Request syntax

The Apsara Stack API (ASAPI) allows you to call API operations by sending HTTP GET requests based on URLs. Each URL must include request parameters. This topic describes the syntax of HTTP GET requests and provides the endpoint of the ASAPI.

Sample request

GetOrganizationList is used in the following unencoded URL request:

```
https://public.asapi.aliyuns.com/asapi/v3?Action=GetOrganizationList&Product=ascm&Version=2019-05-10
&Id=<Organization ID>&<Common parameters>
```

- `https` : the protocol used to transmit the request.
- `public.asapi.aliyuns.com/asapi/v3` : the endpoint of the ASAPI.
- `Action=GetOrganizationList Product=ascm Version=2019-05-10` : the API operation to call.
- `Id` : the ID of the organization.
- `<Common parameters>` : the common parameters specified in the system.

Protocol

The ASAPI supports only HTTPS.

Endpoint

For more information about how to obtain an endpoint, see [Generate an endpoint for the ASAPI](#).

Parameter

To specify an API operation, use the `Action`, `Product`, and `Version` parameters. For example, set `Action` to `GetOrganizationList`, `Product` to `ascm`, and `Version` to `2019-05-10`. You must also specify other operation-specific parameters and common parameters. For more information, see [Common parameters](#).

1.7.3. Request signatures

This topic describes how to sign HTTP API requests. ASAPI uses the request signature to verify the identity of the request sender. ASAPI implements symmetric encryption by using an AccessKey pair to verify the identity of the request sender.

Note

- An AccessKey pair consists of an AccessKey ID and an AccessKey secret, which are issued to each user or organization in the Apsara Uni-manager Management Console.
- The AccessKey ID is used to verify identities of users, and the AccessKey secret is used to encrypt and verify signature strings. You must keep your AccessKey secret confidential.
- ASAPI provides SDKs for Node.js, Python, and Java to facilitate complex signature calculation. For more information, see [Obtain the core package for ASAPI](#).

Step 1: Create a canonicalized query string

1. Arrange the request parameters in alphabetical order, including all common and operation-specific parameters except the `Signature` parameter.

Note

If you use the GET method to send a request, these parameters are connected by ampersands (&) and included in the request URL. The first request parameter follows a question mark (?).

2. Encode the request parameters and their values in UTF-8 based on RFC 3986. The following rules apply in the encoding process:
 - Letters, digits, and special characters such as hyphens (`-`), underscores (`_`), and periods (`.`) do not need to be encoded.
 - Other characters must be percent encoded in the `%XY` format. `XY` represents the ASCII code of the characters in hexadecimal notation. For example, double quotation marks (`"`) are encoded as `%22`.
 - Extended UTF-8 characters are encoded in the `%XY%ZA...` format.
 - Spaces must be encoded as `%20`. Do not encode spaces as plus signs (`+`).

This encoding method is similar to but different from the `application/x-www-form-urlencoded` MIME encoding algorithm.

If you use `java.net.URLEncoder` from the Java standard library, use `percentEncode` to encode request parameters and their values. In the encoded query string, replace the plus signs (`+`) with `%20` , asterisks (`*`) with `%2A` , and `%7E` with tildes (`~`). This way, you can obtain an encoded string that matches the preceding encoding rules.

```
private static final String ENCODING = "UTF-8";
private static String percentEncode(String value) throws UnsupportedOperationException {
    return value != null ? URLEncoder.encode(value, ENCODING).replace("+", "%20").replace("*", "%2A")
        .replace("%7E", "~") : null;
}
```

3. Use equal signs (`=`) to connect the encoded request parameters and their values.
4. Use ampersands (`&`) to connect the encoded request parameters. These parameters must be arranged in the same order as those in Step 1.

Then, a canonicalized query string that follows the request structure is obtained. For more information, see [Request structure](#).

Step 2: Create a string-to-sign

1. Create a `string-to-sign` . You can also use `percentEncode` to encode the canonicalized query string created in Step 1 based on the following rules:

```
StringToSign=
HTTPMethod + "&" + //HTTPMethod: the HTTP method that is used to send a request, such as GET.
percentEncode("/") + "&" + //percentEncode("/"): Encode the forward slash (/) in UTF-8 as %2F.
percentEncode(CanonicalizedQueryString) // Encode the canonicalized query string created in Step 1.
```

2. Calculate the [RFC 2104](#)-compliant HMAC-SHA1 or HMAC-256 value of `StringToSign` . In the following example, Java Base64 is used:

```
String signature = Base64.getEncoder().encodeToString(signData);
```

Note

When you calculate the signature, the key value specified by RFC 2104 is your `AccessKey secret` plus an ampersand (&), which has an ASCII value of 38. For more information, see [Obtain an AccessKey pair](#).

3. Encode the `Signature` parameter based on [RFC 3986](#) and add it to the canonicalized query string.

Example 1: Concatenate parameters

`GetOrganizationList` is used in this example to query regions. For example, `AccessKeyID` is set to testid and `AccessKeySecret` is set to testsecret. Perform the following operations:

1. Construct a canonicalized query string.


```
https://public.asapi.aliyuns.com/asapi/v3/?AccessKeyId=testid&Action=GetOrganizationList&Format=JSON&Id=1&Product=ascm&RegionId=cn-region-test&SignatureMethod=HMAC-SHA1&SignatureNonce=43967c6e-e3ad-44fa-b06b-fcf3db5f39d2&SignatureVersion=1.0&Timestamp=2020-09-15T08%3A50%3A40Z&Version=2019-05-10
```

2. Create a `string-to-sign`.

```
GET&%2F&AccessKeyId%3Dtestid%26Action%3DGetOrganizationList%26Format%3DJSON%26Id%3D1%26Product%3Dascm%26RegionId%3Dcn-region-test%26SignatureMethod%3DHMAC-SHA1%26SignatureNonce%3D43967c6e-e3ad-44fa-b06b-fcf3db5f39d2%26SignatureVersion%3D1.0%26Timestamp%3D2020-09-15T08%253A50%253A40Z%26Version%3D2019-05-10
```

3. Calculate the signature.

Calculate the signature. The key value used for calculation is `testsecret` because

`AccessKeySecret` is set to `testsecret`. The calculated signature is

`OLeaidS1JvxuMvnyH0wuJ+uX5qY=`. Java Base64 is used in the following sample code:

```
String signature = Base64.getEncoder().encodeToString(signData);
```

Encode `Signature=hvqv9LI5RE6kQ4YsQXFAf9VuRIY=` based on RFC 3986 and add it to the canonicalized query string.

```
https://public.asapi.aliyuns.com/asapi/v3/?AccessKeyId=testid&Action=GetOrganizationList&Format=JSON&Id=1&Product=ascm&RegionId=cn-region-test&SignatureMethod=HMAC-SHA1&SignatureNonce=43967c6e-e3ad-44fa-b06b-fcf3db5f39d2&SignatureVersion=1.0&Timestamp=2020-09-15T08%3A50%3A40Z&Version=2019-05-10
```

You can use browsers or tools such as `cURL` and `Wget` to initiate an HTTP request for calling the `DescribeRegions` operation to query the Alibaba Cloud region list.

Example 2: Use the standard library of the programming language

`GetOrganizationList` is used in this example to query regions. For example, `AccessKeyId` is set to `testid`, `AccessKeySecret` is set to `testsecret`, and all request parameters are stored in a Java `Map<String, String>` object.

1. Predefine an encoding method.

```
private static final String ENCODING = "UTF-8";
private static String percentEncode(String value) throws UnsupportedOperationException {
    return value != null ? URLEncoder.encode(value, ENCODING).replace("+", "%20").replace("'", "%2A")
        .replace("%7E", "~") : null;
}
```

2. Predefine the time format for the `Timestamp` parameter. Specify the `Timestamp` parameter in the ISO 8601 format. The time must be in UTC+0.

```
private static final String ISO8601_DATE_FORMAT = "yyyy-MM-dd'T'HH:mm:ss'Z'";
private static String formatIso8601Date(Date date) {
    SimpleDateFormat df = new SimpleDateFormat(ISO8601_DATE_FORMAT);
    df.setTimeZone(new SimpleTimeZone(0, "GMT"));
    return df.format(date);
}
```

3. Create a request string.

```
final String HTTP_METHOD = "GET";
Map parameters = new HashMap();
// Specify request parameters.
parameters.put("Product", "ascm");
parameters.put("Action", "GetOrganizationList");
parameters.put("Version", "2019-05-10");
parameters.put("AccessKeyId", "testid");
parameters.put("RegionId", "cn-region-test");
parameters.put("Timestamp", formatIso8601Date(new Date()));
parameters.put("SignatureMethod", "HMAC-SHA1");
parameters.put("SignatureVersion", "1.0");
parameters.put("SignatureNonce", UUID.randomUUID().toString());
parameters.put("Format", "JSON");
parameters.put("Id", "1");
// Arrange request parameters.
String[] sortedKeys = parameters.keySet().toArray(new String[]{});
Arrays.sort(sortedKeys);
final String SEPARATOR = "&";
// Create a string-to-sign.
StringBuilder stringToSign = new StringBuilder();
stringToSign.append(HTTP_METHOD).append(SEPARATOR);
stringToSign.append(percentEncode("/")).append(SEPARATOR);
StringBuilder canonicalizedQueryString = new StringBuilder();
for(String key : sortedKeys) {
    // Encode the key and the value.
    canonicalizedQueryString.append("&")
        .append(percentEncode(key)).append("=")
        .append(percentEncode(parameters.get(key)));
}
//Encode the canonicalized query string.
stringToSign.append(percentEncode(
    canonicalizedQueryString.toString().substring(1)));
```

4. The signature. The key value used for calculation is `testsecret&` because `AccessKeySecret` is set to `testsecret`. The calculated signature is `OLeaidS1JvxuMvnyHOwuJ%2BuX5qY%3D`.

```
// The following sample code shows how to calculate the signature:
final String ALGORITHM = "HmacSHA1";
final String ENCODING = "UTF-8";
key = "testsecret&";
Mac mac = Mac.getInstance(ALGORITHM);
mac.init(new SecretKeySpec(key.getBytes(ENCODING), ALGORITHM));
byte[] signData = mac.doFinal(stringToSign.getBytes(ENCODING));
String signature = Base64.getEncoder().encodeToString(signData);
```

Encode the Signature parameter based on [RFC 3986](#) and add it to the canonicalized query string. The following URL is obtained:

```
https://public.asapi.aliyuns.com/asapi/v3/?AccessKeyId=testid&Action=GetOrganizationList&Format=JSON&Id=1&Product=ascm&RegionId=cn-region-test&SignatureMethod=HMAC-SHA1&SignatureNonce=43967c6e-e3ad-44fa-b06b-fcf3db5f39d2&SignatureVersion=1.0&Timestamp=2020-09-15T08%3A50%3A40Z&Version=2019-05-10
```

5. Use browsers or tools such as cURL and Wget to initiate an HTTP request.

1.7.4. Response

Responses are returned only in the JSON format. If a return code is greater than or equal to 200 and less than 300, a success response is returned. Otherwise, an error response is returned.

Sample success response

If a request is successful, the request ID and operation-specific parameter values are returned. For more information, see the developer guide of the corresponding Apsara Stack service.

```
{
  "eagleEyeTraceId": "xxx-xxx-xxx-xxx", // The trace ID provided by EagleEye.
  "asapiSuccess": true,
  "RequestId": "xxxxxxxxxx",
  "Regions": { // The regions returned after you call the DescribeRegions operation.
    "Region": [
      {
        "RegionId": "",
        "RegionEndpoint": "",
        "LocalName": ""
      }
    ]
  }
}
```

Sample error response

If a request fails, the following information is returned. For more information, see the developer guide of the corresponding Apsara Stack service.

```
{
  "code": "asapi.server.api.notfound", // The error code.
  "eagleEyeTraceId": "xxx-xxx-xxx-xxx", // The trace ID provided by EagleEye.
  "asapiSuccess": false, // Indicates whether the request is successful.
  "hostId": "xxxx", // The ID of the host.
  "message": "Failed to ....", // The message returned.
  "asapiErrorMessage": "Failed to ....", // The error message provided by the ASAPI.
  "asapiErrorCode": "asapi.server.api.notfound" // The error code provided by the ASAPI.
}
```

1.8. Request signatures

API Gateway authenticates each access request. Therefore, a request must contain signature information regardless of whether it is submitted using HTTP or HTTPS.

API Gateway performs symmetric encryption by using an AccessKey ID and an AccessKey Secret to verify the identity of a requester. The AccessKey ID and AccessKey Secret are issued to visitors by Alibaba Cloud (visitors can apply for and manage them on the official Alibaba Cloud website).

- The AccessKey ID indicates the identity of the visitor.
- The AccessKey Secret is used to encrypt signature strings and verify signature strings sent by the server. Keep your AccessKey Secret confidential.

You can perform the following steps to sign a request:

1. Use request parameters to construct a canonicalized query string.
 - To construct a canonicalized query string, sort all request parameters by name in alphabetical order. These parameters include common request parameters and customized API request parameters, but do not include the Signature parameter.

 **Note** If you send a request by using the `GET` method, the request parameters are included as a part of the request URL. These parameters follow the question mark (?) in the request URL and are connected with ampersands (&).

- Encode the name and value of each request parameter. The parameter names and values must be encoded using UTF-8. The URL encoding rules are described as follows:
 - Uppercase and lowercase letters, digits, hyphens (-), underscores (_), periods (.), and tildes (~) are not encoded.
 - Other characters are encoded as %XY, where XY is the hexadecimal representation of the character in ASCII. For example, double quotation marks (") are encoded as %22.
 - Extended UTF-8 characters are encoded in the %XY%ZA... format.
 - A space is encoded as %20, rather than the plus sign (+).

 **Note** Most libraries that support URL encoding, such as `java.net.URLEncoder`, comply with the MIME encoding rules of `application/x-www-form-urlencoded`. If this encoding method is used, replace the plus signs (+) in the encoded strings with %20, the asterisks (*) with %2A, and %7E with a tilde (~) to conform to the encoding rules.

- Connect the encoded parameter names and values with equal signs (=).

- Sort the equal sign-connected strings by their parameter names alphabetically and connect them with ampersands (&).
2. Use the created canonicalized query string to construct a signature string based on the following rule:

```
StringToSign=
HTTPMethod + "&" +
percentEncode( "/" ) + "&" +
percentEncode(CanonicalizedQueryString)
```

In the preceding example,

- `HTTPMethod` indicates that an HTTP-style request such as `GET` is submitted.
 - `percentEncode("/")` is the encoded value (%2F) of a forward slash (/). The encoding follows the URL encoding rules described in the preceding step.
 - `percentEncode(CanonicalizedQueryString)` is the string constructed using the canonicalized query string. The encoding follows the URL encoding rules described in the preceding step.
3. Use the signature string to calculate the HMAC value of the signature as defined by RFC 2104. Note: The key used to calculate the signature is your AccessKey Secret with an ampersand (&) appended to it. SHA1 is used to calculate the signature.
 4. Encode the HMAC value into a string based on the Base64 encoding rules. This encoded string is the signature value.
 5. Add this signature value as the value of the Signature parameter to the request parameters. You have now completed the request signing process.

 **Note** The obtained signature value must be encoded based on RFC 3986 URL encoding specification before it can be submitted to the API Gateway server as a request parameter value.

Taking DescribeRegions as an example, the request URL placed before the signature is as follows:

```
http://apigateway.[RegionId].aliyuncs.com?Format=json&AccessKeyId=testid&Action=DescribeRegions&SignatureMethod=Hmac-SHA1&SignatureNonce=d48e931b-90c9-49c7-ac86-a70dd3607c88&SignatureVersion=1.0&Version=2016-07-14&Timestamp=2016-09-27T09%3A08%3A30Z
```

The StringToSign placed after the signature is as follows:

```
GET&%2F&AccessKeyId%3Dtestid%26Action%3DDescribeRegions%26Format%3Djson%26SignatureMethod%3DHmac-SHA1%26SignatureNonce%3Dd48e931b-90c9-49c7-ac86-a70dd3607c88%26SignatureVersion%3D1.0%26Timestamp%3D2016-09-27T09%253A08%253A30Z%26Version%3D2016-07-14
```

If the AccessKey ID is testid, the AccessKey Secret is testsecret, the key used for HMAC calculation is testsecret&. The calculated signature is `DRdMb%2F1m7PeToGRBApTI3wThyOg%3D`.

The signed request URL with the Signature parameter added is as follows:

```
http://apigateway.[RegionId].aliyuncs.com?Signature=DRdMb%2F1m7PeToGRBApTI3wThyOg%3D&Format=json&AccessKeyId=testid&Action=DescribeRegions&SignatureMethod=Hmac-SHA1&SignatureNonce=d48e931b-90c9-49c7-ac86-a70dd3607c88&SignatureVersion=1.0&Version=2016-07-14&Timestamp=2016-09-27T09%3A08%3A30Z
```

1.9. API group operations

1.9.1. CreateApiGroup

Description

You can call this operation to create an API group. You must create an API group before creating an API. An API group is a basic attribute of an API.

- This operation is intended for API providers.
- A second-level domain name is automatically allocated to the API group for testing purposes.
- An API group has a region attribute. After you create an API and select a group for the API, the corresponding region is also selected. We recommend that you select the same region to which your back-end services belong to reduce network delay.
- After you create an API group, you can bind a custom domain name to the group.
- The QPS limit on this operation is 50 per user.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set this parameter to CreateApiGroup.
GroupName	String	Yes	The name of the API group to be created. The name must be globally unique. The name must be 4 to 50 characters in length. It must start with a letter and can contain letters, digits, and underscores (_).
Description	String	Yes	The description of the API group to be created. The description can contain a maximum of 180 characters in length.

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.
GroupId	String	The ID of the API group. This ID is generated by the system and is globally unique.
GroupName	String	The name of the API group.
SubDomain	String	The second-level domain name bound to the API group. This domain name is used to test API calls.
Description	String	The description of the API group.

Examples

Sample requests

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=CreateApiGroup &GroupName=Weather &Description=The weather informations. &<Common request parameters>
```

Sample responses

- XML format

```
<CreateApiGroupResponse>
  <RequestId>FF3B7D81-66AE-47E0-BF69-157DCF187514</RequestId>
  <GroupId>523e8dc7bbe04613b5b1d726c2a7889d</GroupId>
  <GroupName>Weather</GroupName>
  <SubDomain>523e8dc7bbe04613b5b1d726c2a7889d-cn-hangzhou.alicloudapi.com</SubDomain>
  <Description>The weather informations</Description>
</CreateApiGroupResponse>
```

- JSON format

```
{
  "RequestId": "FF3B7D81-66AE-47E0-BF69-157DCF187514",
  "GroupId": "523e8dc7bbe04613b5b1d726c2a7889d",
  "GroupName": "Weather",
  "SubDomain": "523e8dc7bbe04613b5b1d726c2a7889d-cn-hangzhou.alicloudapi.com",
  "Description": "The weather informations"
}
```

1.9.2. ModifyApiGroup

Description

You can call this operation to modify the name or description of an existing API group.

- This operation is intended for API providers.
- The QPS limit on this operation is 50 per user.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set this parameter to ModifyApiGroup.
GroupId	String	Yes	The ID of the API group to be modified. This ID is generated by the system and is globally unique.
GroupName	String	No	The name of the API group to be modified. The name must be globally unique. It must be 4 to 50 characters in length. It must start with a letter and can contain letters, digits, and underscores (_). If this parameter is not specified, the name cannot be modified.

Parameter	Type	Required	Description
Description	String	No	The description of the API group to be modified. The description can contain a maximum of 180 characters in length. If this parameter is not specified, the description cannot be modified.

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.
GroupId	String	The ID of the API group. This ID is generated by the system and is globally unique.
GroupName	String	The name of the API group.
SubDomain	String	The second-level domain name that is automatically allocated to the API group.
Description	String	The description of the API group.

Examples

Sample requests

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=ModifyApiGroup&Description=New weather informations. &GroupId=523e8dc7bbe04613b5b1d726c2a7889d &GroupName=NewWeather &<Common request parameters>
```

Sample responses

- XML format

```
<ModifyApiGroupResponse>
  <RequestId>4CF287C6-CE5B-477B-BE27-C48F99EADBC8</RequestId>
  <GroupId>523e8dc7bbe04613b5b1d726c2a7889d</GroupId>
  <GroupName>NewWeather</GroupName>
  <SubDomain>523e8dc7bbe04613b5b1d726c2a7889d-cn-hangzhou.alicloudapi.com</SubDomain>
  <Description>New weather informations. </Description>
</ModifyApiGroupResponse>
```

- JSON format

```
{
  "RequestId": "4CF287C6-CE5B-477B-BE27-C48F99EADBC8",
  "GroupId": "523e8dc7bbe04613b5b1d726c2a7889d",
  "GroupName": "NewWeather",
  "SubDomain": "523e8dc7bbe04613b5b1d726c2a7889d-cn-hangzhou.alicloudapi.com"
  "Description": "New weather informations."
}
```


1.9.3. DeleteApiGroup

Description

You can call this operation to delete a specified API group.

- This operation is intended for API providers.
- An API group containing APIs cannot be deleted. To delete the API group, you must first delete its APIs.
- After an API group has been deleted, the second-level domain name assigned to the API group is automatically invalidated.
- If the specified API group does not exist, a successful response will still appear.
- The QPS limit on this operation is 50 per user.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DeleteApiGroup.
GroupId	String	Yes	The API group ID, which is generated by the system and globally unique.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=DeleteApiGroup
&GroupId=523e8dc7bbe04613b5b1d726c2a7889d
&<Common request parameters>
```

Sample responses

- XML format

```
<DeleteApiGroupResponse>
  <RequestId>E8515BA6-81CD-4191-A7CF-C4FCDD3C0D99</RequestId>
</DeleteApiGroupResponse>
```

- JSON format

```
{
  "RequestId": "E8515BA6-81CD-4191-A7CF-C4FCDD3C0D99"
}
```

1.9.4. CreateApiStageVariable

Description

You can call this operation to add a variable to a specified environment.

This operation is intended for API providers.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to CreateApiStageVariable.
GroupId	String	Yes	The ID of the API group.
StageId	String	Yes	The ID of the runtime environment.
VariableName	String	Yes	The name of the variable to be added. This parameter is case-sensitive.
VariableValue	String	No	The value of the variable to be added.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=CreateApiStageVariable
&GroupId=523e8dc7bbe04613b5b1d726c2a7889d
&StageId=6EF60BEC-0242-43AF-BB20-270359FB54A7
&VariableName=serverName
&VariableValue=api.domain.com
&<Common request parameters>
```

Sample responses

- XML format

```
<CreateApiStageVariableResponse>
  <RequestId>03442A3D-3B7D-434C-8A95-A5FEB999B529</RequestId>
</CreateApiStageVariableResponse>
```

- JSON format

```
{
  "RequestId": "03442A3D-3B7D-434C-8A95-A5FEB999B529"
}
```

1.9.5. DeleteApiStageVariable

Description

You can call this operation to delete a variable in a specified environment.

This operation is intended for API providers.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DeleteApiStageVariable.
GroupId	String	Yes	The ID of the API group.
StageId	String	Yes	The ID of the runtime environment.
VariableName	String	Yes	The name of the variable to be deleted. This parameter is case-sensitive.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=DeleteApiStageVariable
&GroupId=523e8dc7bbe04613b5b1d726c2a7889d
&StageId=6EF60BEC-0242-43AF-BB20-270359FB54A7
&VariableName=serverName
&<Common request parameters>
```

Sample responses

- XML format

```
<DeleteApiStageVariableResponse>
  <RequestId>03442A3D-3B7D-434C-8A95-A5FEB969B529</RequestId>
</DeleteApiStageVariableResponse>
```

- JSON format

```
{
  "RequestId": "03442A3D-3B7D-434C-8A95-A5FEB969B529"
}
```

1.9.6. DescribeApiGroup

Description

You can call this operation to query details about an API group, including the automatically generated second-level domain name, custom domain name, and SSL certificate.

- This operation is intended for API providers.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeApiGroup.
GroupId	String	Yes	The API group ID, which is generated by the system and globally unique.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
GroupId	String	The API group ID, which is generated by the system and globally unique.
GroupName	String	The name of the API group.
SubDomain	String	The second-level domain name automatically assigned to the API group.
Description	String	The description of the API group.
CreateTime	String	The creation time (UTC) of the API group.
ModifyTime	String	The last modification time (UTC) of the API group.
RegionId	String	The region to which the API group belongs.
Status	String	The status of the API group. • NORMAL: The API group is normal. • DELETE: The API group has been deleted.

Name	Type	Description
BillingStatus	String	The billing status of the API group. • NORMAL: The API group is normal. • LOCKED: The API group is locked due to overdue payments.
IllegalStatus	String	The validity status of the API group. Valid values: • NORMAL: The API group is normal. • LOCKED: The API group is locked because it is not valid.
TrafficLimit	Integer	The upper QPS limit of the API group. The default value is 500. You can increase the upper limit by submitting an application.
CustomDomains	CustomDomain	The custom domain name information.
StageItems	StageInfo	The runtime environment information.

Examples

Sample request

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=DescribeApiGroup
&GroupId=523e8dc7bbe04613b5b1d726c2a7889d
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeApiGroupResponse>
  <RequestId>03442A3D-3B7D-434C-8A95-A5FEB989B519</RequestId>
  <GroupId>523e8dc7bbe04613b5b1d726c2a7889d</GroupId>
  <GroupName>NewWeather</GroupName>
  <SubDomain>927d50c0f2e54b359919923d908bb015-cn-hangzhou.alicloudapi.com</SubDomain>
  <Description>New weather informations. </Description>
  <CreateTime>2016-08-01T06:53:02Z</CreateTime>
  <ModifiedTime>2016-08-01T06:54:32Z</ModifiedTime>
  <RegionId>cn-hangzhou</RegionId>
  <Status>NORMAL</Status>
  <BillingStatus>NORMAL</BillingStatus>
  <IllegalStatus>NORMAL</IllegalStatus>
  <TrafficLimit>500</TrafficLimit>
  <CustomDomains>
    <CustomDomain>
      <DomainName>api.demo.com</DomainName>
      <CertificateId>6EF60BEC-0242-43AF-BB20-270359FB54A7</CertificateId>
      <CertificateName>myCertificate</CertificateName>
      <DomainNameResolution>RESOLVED</DomainNameResolution>
      <DomainStatus>BINDING</DomainStatus>
    </CustomDomain>
  </CustomDomains>
  <StageItems>
    <StageInfo>
      <StageId>123e8dc7bbe01613b5b1d726c2a7887e</StageId>
      <StageName>RELEASE</StageName>
      <Description>MYRELEASE</Description>
    </StageInfo>
    <StageInfo>
      <StageId>123e8dc7bbe01613b5b1d726c2a7888e</StageId>
      <StageName>TEST</StageName>
      <Description>MYTEST</Description>
    </StageInfo>
  </StageItems>
</DescribeApiGroupResponse>
```

- JSON format

```
{
  "RequestId": "03442A3D-3B7D-434C-8A95-A5FEB989B519",
  "GroupId": "523e8dc7bbe04613b5b1d726c2a7889d",
  "GroupName": "NewWeather",
  "SubDomain": "927d50c0f2e54b359919923d908bb015-cn-hangzhou.alicloudapi.com",
  "Description": "New weather informations.",
  "CreatedTime": "2016-08-01T06:53:02Z",
  "ModifiedTime": "2016-08-01T06:54:32Z",
  "RegionId": "cn-hangzhou",
  "Status": "NORMAL",
  "BillingStatus": "NORMAL",
  "IllegalStatus": "NORMAL",
  "TrafficLimit": "500",
  "CustomDomains": {
    "CustomDomain": {
      "DomainName": "api.demo.com",
      "CertificateId": "6EF60BEC-0242-43AF-BB20-270359FB54A7",
      "CertificateName": "myCertificate",
      "DomainNameResolution": "RESOLVED",
      "DomainStatus": "BINDING"
    }
  },
  "StageItems": {
    "StageInfo": [
      {
        "StageId": "123e8dc7bbe01613b5b1d726c2a7887e",
        "StageName": "RELEASE",
        "Description": "MYRELEASE"
      },
      {
        "StageId": "123e8dc7bbe01613b5b1d726c2a7888e",
        "StageName": "TEST",
        "Description": "MYTEST"
      }
    ]
  }
}
```

1.9.7. DescribeApiGroups

Description

You can call this operation to query existing API groups and their basic information.

This operation is intended for API providers.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeApiGroups.

Name	Type	Required	Description
GroupId	String	No	The API group ID, which is generated by the system and globally unique.
GroupName	String	No	The name of the API group.
PageNumber	Integer	No	The specific page number that you want to query. The default value is 1. The starting number is 1.
PageSize	Integer	No	The number of rows per page. The maximum value is 100. The default value is 10.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
TotalCount	Integer	The total number of rows.
PageNumber	Integer	The specified page number.
PageSize	Integer	The specified number of rows returned per page.
ApiGroupAttributes	ApiGroupAttribute	The returned group set.

Examples

Sample request

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=DescribeApiGroups
&<Common request parameters>
```

Sample responses

- XML format


```
<DescribeApiGroupsResponse>
  <RequestId>D6E46F10-F26C-4AA0-BB69-FE2743D9AE62</RequestId>
  <TotalCount>2</TotalCount>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <ApiGroupAttributes>
    <ApiGroupAttribute>
      <GroupId>be6d2abcc0dd4f749fc2d2edd6567164</GroupId>
      <GroupName>Traffic</GroupName>
      <SubDomain>be6d2abcc0dd4f749fc2d2edd6567164-cn-hangzhou.alicloudapi.com</SubDomain>
      <Description>TrafficInformations. </Description>
      <CreatedTime>2016-08-01T08:45:15Z</CreatedTime>
      <ModifiedTime>2016-08-01T08:45:15Z</ModifiedTime>
      <RegionId>cn-hangzhou</RegionId>
      <TrafficLimit>500</TrafficLimit>
      <BillingStatus>NORMAL</BillingStatus>
      <IllegalStatus>NORMAL</IllegalStatus>
    </ApiGroupAttribute>
    <ApiGroupAttribute>
      <GroupId>927d50c0f2e54b359919923d908bb015</GroupId>
      <GroupName>NewWeather</GroupName>
      <SubDomain>927d50c0f2e54b359919923d908bb015-cn-hangzhou.alicloudapi.com</SubDomain>
      <Description>NewWeatherInformations. </Description>
      <CreatedTime>2016-08-01T06:54:32Z</CreatedTime>
      <ModifiedTime>2016-08-01T06:54:32Z</ModifiedTime>
      <RegionId>cn-hangzhou</RegionId>
      <TrafficLimit>500</TrafficLimit>
      <BillingStatus>NORMAL</BillingStatus>
      <IllegalStatus>NORMAL</IllegalStatus>
    </ApiGroupAttribute>
  </ApiGroupAttributes>
</DescribeApiGroupsResponse>
```

- JSON format

```
{
  "RequestId": "D6E46F10-F26C-4AA0-BB69-FE2743D9AE62",
  "TotalCount": "2",
  "PageSize": "10",
  "PageNumber": "1",
  "ApiGroupAttributes": {
    "ApiGroupAttribute": [
      {
        "GroupId": "be6d2abcc0dd4f749fc2d2edd6567164",
        "GroupName": "Traffic",
        "SubDomain": "be6d2abcc0dd4f749fc2d2edd6567164-cn-hangzhou.alicloudapi.com",
        "Description": "TrafficInformations.",
        "CreatedTime": "2016-08-01T08:45:15Z",
        "ModifiedTime": "2016-08-01T08:45:15Z",
        "RegionId": "cn-hangzhou",
        "TrafficLimit": "500",
        "BillingStatus": "NORMAL",
        "IllegalStatus": "NORMAL"
      },
      {
        "GroupId": "927d50c0f2e54b359919923d908bb015",
        "GroupName": "NewWeather",
        "SubDomain": "927d50c0f2e54b359919923d908bb015-cn-hangzhou.alicloudapi.com",
        "Description": "NewWeatherInformations.",
        "CreatedTime": "2016-08-01T06:54:32Z",
        "ModifiedTime": "2016-08-01T06:54:32Z",
        "RegionId": "cn-hangzhou",
        "TrafficLimit": "500",
        "BillingStatus": "NORMAL",
        "IllegalStatus": "NORMAL"
      }
    ]
  }
}
```

1.9.8. DescribeApiStage

Description

You can call this operation to query details about a specified runtime environment of an API group.

- This operation is intended for API providers.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeApiStage.
GroupId	String	Yes	The ID of the API group.
StageId	String	Yes	The ID of the runtime environment.

Response parameters

Response parameters

Name	Type	Description
RequestId	String	The request ID.
GroupId	String	The ID of the API group.
StageId	String	The ID of the runtime environment.
StageName	String	The name of the runtime environment.
Description	String	The description of the runtime environment.
CreateTime	String	The creation time (UTC) of the runtime environment.
ModifiedTime	String	The last modification time (UTC) of the runtime environment.
Variables	VariableItem	The variable information.

Examples

Sample request

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=DescribeApiStage
&GroupId=523e8dc7bbe04613b5b1d726c2a7889d
&StageId=6EF60BEC-0242-43AF-BB20-270359FB54A7
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeApiStageResponse>
  <RequestId>03442A3D-3B7D-434C-8A95-A5FEB989B529</RequestId>
  <GroupId>523e8dc7bbe04613b5b1d726c2a7889d</GroupId>
  <StageID>123e8dc7bbe01613b5b1d726c2a7887e</StageID>
  <StageName>RELEASE</StageName>
  <Description>myRELEASE</Description>
  <CreatedTime>2016-08-01T06:53:02Z</CreatedTime>
  <ModifiedTime>2016-08-01T06:54:32Z</ModifiedTime>
  <Status>NORMAL</Status>
  <BillingStatus>NORMAL</BillingStatus>
  <IllegalStatus>NORMAL</IllegalStatus>
  <TrafficLimit>500</TrafficLimit>
  <Variables>
    <VariableItem>
      <VariableName>serverName</VariableName>
      <VariableValue>api.domain.com</VariableValue>
    </VariableItem>
    <VariableItem>
      <VariableName>version</VariableName>
      <VariableValue>v1.0</VariableValue>
    </VariableItem>
  </Variables>
</DescribeApiStageResponse>
```

- JSON format

```
{
  "RequestId": "03442A3D-3B7D-434C-8A95-A5FEB989B529",
  "GroupId": "523e8dc7bbe04613b5b1d726c2a7889d",
  "StageID": "123e8dc7bbe01613b5b1d726c2a7887e",
  "StageName": "RELEASE",
  "Description": "myRELEASE",
  "CreatedTime": "2016-08-01T06:53:02Z",
  "ModifiedTime": "2016-08-01T06:54:32Z",
  "Status": "NORMAL",
  "BillingStatus": "NORMAL",
  "IllegalStatus": "NORMAL",
  "TrafficLimit": "500",
  "Variables": {
    "VariableItem": [
      {
        "VariableName": "serverName",
        "VariableValue": "api.domain.com"
      },
      {
        "VariableName": "version",
        "VariableValue": "v1.0"
      }
    ]
  }
}
```

1.10. Domain name operations

1.10.1. SetDomain

Description

You can call this operation to bind a custom domain name to a specified API group.

- This operation is intended for API providers.
- Before you bind an independent domain name to an API group, you must resolve the domain name. You can add a CNAME record to resolve the domain name to the second-level domain name of the group. Alternatively, you can add an A record to resolve the domain name to the IP address of the second-level domain name server.
- To bind the independent domain name of another group to the current group, you must resolve the independent domain name and then bind it to the current group.
- If HTTPS is used, you must also bind the SSL certificate and specify the CertificateName, CertificateBody, and PrivateKey parameters.
- You can then upload the SSL certificate. For more information, see SetDomainCertificate.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to SetDomain.
GroupId	String	Yes	The ID of the API group to which the domain name is to be bound. This ID is generated by the system and is globally unique.
DomainName	String	Yes	The custom domain name.
CertificateName	String	No	The name of the SSL certificate.
CertificateBody	String	No	The certificate body.
PrivateKey	String	No	The private key of the certificate.

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.
GroupId	String	The ID of the API group to which the domain name is bound. This ID is generated by the system and is globally unique.
DomainName	String	The custom domain name.

Parameter	Type	Description
SubDomain	String	The second-level domain name bound to the API group. This domain name is used to test API calls.
DomainBindingStatus	String	The binding status of the custom domain name. The value BINDING indicates that the domain name has been bound.

Examples

Sample requests

```
https://apigateway.cn-hangzhou.aliyuncs.com/?Action=SetDomain
&GroupId=927d50c0f2e54b359919923d908bb015
&DomainName=api.demo.com
&<Common request parameters>
```

Sample success responses

- XML format

```
<SetDomainResponse>
  <RequestId>6EF60BEC-0242-43AF-BB20-270359FB54A7</RequestId>
  <GroupId>927d50c0f2e54b359919923d908bb015</GroupId>
  <DomainName>api.demo.com</DomainName>
  <SubDomain>927d50c0f2e54b359919923d908bb015-cn-hangzhou.alicloudapi.com</SubDomain>
  <DomainBindingStatus>BINDING</DomainBindingStatus>
</SetDomainResponse>
```

- JSON format

```
{
  "RequestId": "6EF60BEC-0242-43AF-BB20-270359FB54A7",
  "GroupId": "927d50c0f2e54b359919923d908bb015",
  "DomainName": "api.abcdef.com",
  "SubDomain": "927d50c0f2e54b359919923d908bb015-cn-hangzhou.alicloudapi.com",
  "DomainBindingStatus": "BINDING"
}
```

1.10.2. SetDomainCertificate

Description

You can call this operation to upload an SSL certificate for a specific custom domain name.

- This operation is intended for API providers.
- The SSL certificate must match the custom domain name.
- HTTPS-based API services will be available after the SSL certificate has been bound.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to SetDomainCertificate.
GroupId	String	Yes	The ID of the API group that you want to add an SSL certificate to. This ID is generated by the system and globally unique.
DomainName	String	Yes	The custom domain name.
CertificateName	String	Yes	The SSL certificate name.
CertificateBody	String	Yes	The content of the SSL certificate.
CertificatePrivateKey	String	Yes	The private key of the SSL certificate.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
<https://apigateway.cn-hangzhou.aliyuncs.com/?Action=SetDomainCertificate
&GroupId=927d50c0f2e54b359919923d908bb015
&DomainName=api.demo.com
&CertificateName=test_cert
&CertificateBody=-----BEGIN CERTIFICATE-----
MIICATCCAdICCQDLdvXtNkCrHjANBgkqhkiG9w0BAQUFADB5MQswCQYDVQQGEwJD
TjELMAKGA1UECBMCWkokxZAJBgNVBACTAkhaMQ0wCwYDVQQKEwR0ZXN0MQ0wCwYD
VQQLLEwR0ZXN0MRQwEgYDVQQDEwthcGkuZWxzZC5jbJECMBogCSqGSib3DQEJARYN
dGVzdEB0ZXN0LmNvbTAeFw0xNjAzMzEwMzMxMTBaFw0yNjAzMjkxMzMxMTBaMHkx
CzAJBgNVBAYTAkNOMQswCQYDVQQIEwJaSjELMAKGA1UEBxMCSFoxDTALBgNVBAOT
BHRLlc3QxDALBgNVBASTBHRLlc3QxFDASBgNVBAMTC2FwaS5pbGFkLmNuMRwwGgYJ
KoZIhvcNAQkBFBG10ZXN0HRlrc3QuY29tMIGfMA0GCsqGSib3DQEBAQUAAAGNADCB
iQKBGQDFPttXLedyMF+tk/9VIGIIQ90LEx6JwfuxKX38aO8zlN3+Kxu7kmXBLYN7
kBT7yZdsHB087wlxxXPg7FO+3HjEcWay8FgBFNfrnLLjXEK23Lrkn/3AdvULQ+eEi
oVfOokQ1PO7GYFZSo8UFvBzol2An/f2Sd/bey713/rIUvgUd7wiDAQABMA0GCsqG
Sib3DQEBBQUAA4GBAAaj2TQ8jzbmN5IDM8fMOARKLQK8qTgrHMAMEq7PJwNRtK
A05enhbgZKJVkyYhK5nccWb3XZuklm6KX/lmWM1zfxi9Ejvd6Xkvxd9RpdZwlod
zu6LnGpfioYFIBy301sFp0ACPudUvE1tVckrqM/ONPNhHWEnkAT9DF84hEN
-----END CERTIFICATE-----
&CertificatePrivateKey=-----BEGIN RSA PRIVATE KEY-----
MIICXAIBAAKBGQDFPttXLedyMF+tk/9VIGIIQ90LEx6JwfuxKX38aO8zlN3+Kxu7
kmXBLYN7kBT7yZdsHB087wlxxXPg7FO+3HjEcWay8FgBFNfrnLLjXEK23Lrkn/3Ad
vULQ+eEioVfOokQ1PO7GYFZSo8UFvBzol2An/f2Sd/bey713/rIUvgUd7wiDAQAB
AoGAeBxKgvlYv5Mg8+MIBUH07b3wi1LGiPw882yfTiI+vM4jORBFqg3TgtAwWw/
FicVq3E23h6Ysn2vb6eNH+8x6DtGGZFiaWqlubWGEFenct8GPnlNY6JnxDdLMoGT
KOP0r4qMZD5gSRs4sGR/wcGdbCGvSaFrzEConLmsaSlgLTKCQQD5KVvwchG/pai0
o13LJ9F4TVSegt8roH6Q00SuEb4GiKqUIY+Q1+PIBMHS1VciBJGyAWreLJkZnfKK
g80cdL6VAkeAyuiPBt4u9dc68qet9vgVAYBI95vyCvg2u+MdVJKFYKaQNEDxbeyV
qsrlsJ46LCAsQiLpzdeyrOioGiW3yNo9cwJBakKn0EMR0UtOJcIFSy8aaFahQXqf
5P1MZ8BpzHXU68qpza02AJLYTvDa4dEeXRJ39QWRqEQLySEgH0K0unJ5oiUCQDtp
Ln+vTla091CXyit+5f+jhTni0LL97GDFFhBuOlBU1irZ6ik7IOsu9xo3lWPMgzZH
XLfjuffAw3+sbYyEwhsCQEtKrCYEI5PQ4Z2RjonIBWWgx+hDKd6qe5QM4Asr5t
SDX2p8U+SnnvzJ3HuLM2ZB3D8duKHCrKwOjX7nlXHo=
-----END RSA PRIVATE KEY-----
<&Common request parameters>
```

Sample responses

- XML format

```
<SetDomainCertificateResponse>
  <RequestId>6EF60BEC-0242-43AF-BB20-270359FB54A7</RequestId>
</SetDomainCertificateResponse>
```

- JSON format

```
{
  "RequestId": "6EF60BEC-0242-43AF-BB20-270359FB54A7",
}
```

1.10.3. DescribeDomain

Description

You can call this operation to query details about the custom domain name bound to an API group. The details include the automatically assigned second-level domain name, custom domain name, and SSL certificate.

This operation is intended for API providers.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeDomain.
GroupId	String	Yes	The ID of the API group to which the domain name to be queried is bound. This ID is generated by the system and globally unique.
DomainName	String	Yes	The custom domain name.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
GroupId	String	The ID of the API group to which the deleted domain name is bound. This ID is generated by the system and globally unique.
DomainName	String	The custom domain name.
SubDomain	String	The second-level domain name automatically assigned to the API group.
CertificateId	String	The SSL certificate ID, which is automatically generated by the system.
CertificateName	String	The SSL certificate name.
CertificateBody	String	The content of the SSL certificate.
CertificatePrivateKey	String	The private key of the SSL certificate.
DomainBindingStatus	String	The binding status of the custom domain name. Valid values: • BINDING: The domain name has been bound. • BOUND: The domain name has not been bound.

Name	Type	Description
DomainCNAMEStatus	String	The domain name resolution status. Valid values: - RESOLVED: The domain name has been resolved. - UNRESOLVED: The domain name has not been resolved.

Examples

Sample request

```
https://apigateway.cn-hangzhou.aliyuncs.com/?Action=DescribeDomain
&GroupId=927d50c0f2e54b359919923d908bb015
&DomainName=api.demo.com
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeDomainResponse>
  <RequestId>6EF60BEC-0242-43AF-BB20-270359FB54A7</RequestId>
  <GroupId>927d50c0f2e54b359919923d908bb015</GroupId>
  <SubDomain>927d50c0f2e54b359919923d908bb015-cn-hangzhou.alicloudapi.com</SubDomain>
  <DomainName>api.demo.com</DomainName>
  <CertificateId>6EF60BEC-0242-43AF-BB20-270359FB54A7</CertificateId>
  <CertificateName>myCertificate</CertificateName>
  <CertificateBody>..</CertificateBody>
  <CertificatePrivateKey>..</CertificatePrivateKey>
  <DomainBindingStatus>BINDING</DomainBindingStatus>
  <DomainCNAMEStatus>RESOLVED</DomainCNAMEStatus>
</DescribeDomainResponse>
```

- JSON format

```
{
  "RequestId": "6EF60BEC-0242-43AF-BB20-270359FB54A7",
  "GroupId": "927d50c0f2e54b359919923d908bb015",
  "SubDomain": "927d50c0f2e54b359919923d908bb015-cn-hangzhou.alicloudapi.com",
  "DomainName": "api.demo.com",
  "CertificateId": "6EF60BEC-0242-43AF-BB20-270359FB54A7",
  "CertificateName": "myCertificate",
  "CertificateBody": "..",
  "CertificatePrivateKey": "..",
  "DomainBindingStatus": "BINDING",
  "DomainCNAMEStatus": "RESOLVED"
}
```

1.10.4. DeleteDomain

Description

You can call this operation to unbind the custom domain name from a specified API group.

- This operation is intended for API providers.
- If the specified domain name does not exist, a successful response will still appear.
- Unbinding the domain name of an API group will affect access to the APIs in the group. Exercise caution when using this operation.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DeleteDomain.
GroupId	String	Yes	The ID of the API group to which the domain name to be deleted is bound. This ID is generated by the system and globally unique.
DomainName	String	Yes	The custom domain name.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
https://apigateway.cn-hangzhou.aliyuncs.com/?Action=DeleteDomain
&GroupId=927d50c0f2e54b359919923d908bb015
&DomainName=api.demo.com
&<Common request parameters>
```

Sample responses

- XML format

```
<DeleteDomainResponse>
  <RequestId>6EF60BEC-0242-43AF-BB20-270359FB54A7</RequestId>
</DeleteDomainResponse>
```

- JSON format

```
{
  "RequestId": "6EF60BEC-0242-43AF-BB20-270359FB54A7"
}
```

1.10.5. DeleteDomainCertificate

Description

You can call this operation to delete the SSL certificate of a specific domain name.

- This operation is intended for API providers.
- If the specified SSL certificate does not exist, a successful response will still appear.
- If the specified API group does not exist, the InvalidGroupId.NotFound error is returned.
- HTTPS access is not supported after the SSL certificate has been deleted. Exercise caution when using this API.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DeleteDomainCertificate.
GroupId	String	Yes	The ID of the API group containing the SSL certificate that you want to delete. This ID is generated by the system and globally unique.
DomainName	String	Yes	The custom domain name.
CertificateId	String	Yes	The ID of the SSL certificate that you want to delete. It is automatically generated by the system and globally unique.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
https://apigateway.cn-hangzhou.aliyuncs.com/?Action=DeleteDomainCertificate
&GroupId=927d50c0f2e54b359919923d908bb015
&DomainName=api.demo.com
&CertificateId=6EF60BEC-0242-43AF-BB20-270359FB54A7
&<Common request parameters>
```

Sample responses

- XML format

```
<DeleteDomainCertificateResponse>
  <RequestId>6EF60BEC-0242-43AF-BB20-270359FB54A7</RequestId>
</DeleteDomainCertificateResponse>
```

- JSON format

```
{
  "RequestId": "6EF60BEC-0242-43AF-BB20-270359FB54A7"
}
```

1.11. API management operations

1.11.1. CreateApi

Description

You can call this operation to create an API.

- This operation is intended for API providers.
- The name of each API within the same group must be unique.
- Each request path within the same group must be unique.
- A group can contain up to 200 APIs.
- The QPS limit on this operation is 50 per user.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to CreateApi.
GroupId	String	Yes	The ID of the API group that you want to create an API in.
ApiName	String	Yes	The name of the API that you want to create, which is unique within the API group. The name must be 4 to 50 characters in length. It must start with a letter and can contain letters, numbers, and underscores (_).
Visibility	String	Yes	Indicates whether the API is public. Valid values: • PUBLIC: Indicates the API is public. In Apsara Stack, this value is invalid and the visibility of all APIs is fixed as PRIVATE. • PRIVATE: Indicates the API is private.
Description	String	Yes	The API description, which cannot exceed 180 characters.

Name	Type	Required	Description
AuthType	String	Yes	The API security authorization type. Valid values: • APP: Only authorized applications can call the API. • ANONYMOUS: The API can be called anonymously. In such a mode, you must note the following: ◦ Anyone who can obtain this API service information will have the permission to call this API. API Gateway does not authenticate callers and cannot set user-specific throttling policies. If you make this API public, set API-based throttling policies. ◦ We do not recommend making APIs with anonymous authentication available in the Alibaba Cloud Marketplace. API Gateway cannot bill callers separately or control the number of calls. Before you add a group containing such APIs to the Marketplace, we recommend that you move them to another group, set their Visibility to PRIVATE, or set their AuthType to APP. • APPOPENID: The third-party OpenID Connect account authentication method is used, allowing only authorized applications to call the API. If this method is selected, the OpenIdConnectConfig parameter is required.
OpenIdConnectConfig	String	Yes	The OpenID Connect configuration items. For more information, see ApiAttributesType.md#OpenIdConnectConfig.
RequestConfig	String	Yes	The configuration items for an API request sent by a consumer to API Gateway. For more information, see ApiAttributesType.md#RequestConfig.

Name	Type	Required	Description
ServiceConfig	String	Yes	The configuration items for an API request sent by API Gateway to a backend service. For more information, see ApiAttributesType.md#ServiceConfig .
RequestParameters	String	Yes	The parameter description for an API request sent by a consumer to API Gateway. For more information, see ApiAttributesType.md#RequestParameters .
ServiceParameters	String	Yes	The parameter description for an API request sent by API Gateway to a backend service. For more information, see ApiAttributesType.md#ServiceParameters .
ServiceParametersMap	String	Yes	The mappings between parameters of a request sent by a consumer to API Gateway and parameters of a request sent by API Gateway to a backend service. For more information, see ApiAttributesType.md#ServiceParametersMap .
ResultType	String	Yes	The format of the response from the backend service. Valid values: JSON, TEXT, BINARY, XML, and HTML.
ResultSample	String	Yes	The sample response from the backend service.
FailResultSample	String	No	The sample error response from the backend service.
ErrorCodeSamples	String	No	The sample error code returned by the backend service. For more information, see ApiAttributesType.md#ErrorCodeSamples .

Response parameters

Name	Type	Description
RequestId	String	The ID of the current API creation request.
ApId	String	The ID of the API being created.

Examples

Sample request

```
https://ecs.aliyuncs.com/?Action=CreateApi
&GroupId=08ae4aa0f95e4321849ee57f4e0b3077
&ApiName=ApiName
&Visibility=PUBLIC
&Description=Api description
&AuthType=APP
&RequestConfig={"RequestProtocol":"HTTP","RequestHttpMethod":"GET","RequestPath":"/v3/getUserTest/{userId}","BodyFormat":"FORM","PostBodyDescription":""}
&ServiceConfig={"ServiceProtocol":"HTTP","ServiceHttpMethod":"GET","ServiceAddress":"http://www.customdomain.com","ServiceTimeout":"1000","ServicePath":"/v3/getUserTest/{userId}"}
&RequestParameters=[{"ParameterType":"Number","Required":"OPTIONAL","isHide":false,"ApiParameterName":"age","DefaultValue":"20","DemoValue":"20","Description":"Age","MinValue":18,"MaxValue":100,"Location":"Head"},{"ParameterType":"String","Required":"OPTIONAL","isHide":false,"ApiParameterName":"sex","DefaultValue":"boy","DemoValue":"boy","Description":"Gender","EnumValue":"boy,girl","Location":"Query"},{"ParameterType":"Number","Required":"REQUIRED","isHide":false,"ApiParameterName":"userId","MaxLength":10,"MinValue":10000000,"MaxValue":100000000,"Location":"Path"},{"ApiParameterName":"CaClientIp","ParameterLocation":{"name":"Head","orderNumber":0},"Location":"Head","ParameterType":"String","Required":"REQUIRED","Description":"Client IP address"},{"ApiParameterName":"constance","ParameterLocation":{"name":"Head","orderNumber":0},"Location":"Head","ParameterType":"String","Required":"REQUIRED","DefaultValue":"constance","Description":"constance"}]
&ServiceParameters=[{"ServiceParameterName":"age","Location":"Head","Type":"Number","ParameterCatalog":"REQUEST"},{"ServiceParameterName":"sex","Location":"Query","Type":"String","ParameterCatalog":"REQUEST"},{"ServiceParameterName":"userId","Location":"Path","Type":"Number","ParameterCatalog":"REQUEST"},{"ServiceParameterName":"clientIp","Location":"Head","Type":"String","ParameterCatalog":"SYSTEM"},{"ServiceParameterName":"constance","Location":"Head","Type":"String","ParameterCatalog":"CONSTANT"}]
&ServiceParametersMap=[{"ServiceParameterName":"age","RequestParameterName":"age"},{"ServiceParameterName":"sex","RequestParameterName":"sex"},{"ServiceParameterName":"userId","RequestParameterName":"userId"},{"ServiceParameterName":"clientIp","RequestParameterName":"CaClientIp"},{"ServiceParameterName":"constance","RequestParameterName":"constance"}]
&ResultType=HTML
&ResultSample=200
&<Common request parameters>
```

Sample responses

- XML format

```
<CreateApiResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
  <Apild>8afff6c8c4c6447abb035812e4d66b65</Apild>
</CreateApiResponse>
```

- JSON format

```
{
  "RequestId":"6C87A26A-6A18-4B8E-8099-705278381A2C",
  "Apild":"8afff6c8c4c6447abb035812e4d66b65"
}
```

1.11.2. ModifyApi

Description

You can call this operation to modify the definition of a specified API.

- This operation is intended for API providers.
- When you modify an API name, ensure that the name of each API within the same group is unique.
- When you modify the request path, ensure that each request path within the same group is unique.
- The QPS limit on this operation is 50 per user.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to ModifyApi.
GroupId	String	Yes	The ID of the specified API group.
ApiId	String	Yes	The ID of the API that you want to modify.
ApiName	String	Yes	The name of the API that you want to modify, which is unique within the API group. The name must be 4 to 50 characters in length. It must start with a letter and can contain letters, numbers, and underscores (_).
Visibility	String	Yes	Indicates whether the API is public. Valid values: • PUBLIC: Indicates the API is public. In Apsara Stack, this value is invalid and the visibility of all APIs is fixed as PRIVATE. • PRIVATE: Indicates the API is private.
Description	String	Yes	The API description, which cannot exceed 180 characters.
AuthType	String	Yes	The API security authorization type. Valid values: • APP: Only authorized applications can call the API. • ANONYMOUS: The API can be called anonymously. In such a mode, you must note the following: ◦ Anyone who can obtain this API service information will have the permission to call this API. API Gateway does not authenticate callers and cannot set user-specific throttling policies. If you make this API public, set API-based throttling policies. ◦ We do not recommend making APIs with anonymous authentication available in the Alibaba Cloud Marketplace. API Gateway cannot bill callers separately or control the number of calls. Before you add a group containing such APIs to the Marketplace, we recommend that you move them to another group, set their Visibility to PRIVATE, or set their AuthType to APP. • APPOpenID: The third-party OpenID Connect account authentication method is used, allowing only authorized applications to call the API. If this method is selected, the OpenIdConnectConfig parameter is required.

Name	Type	Required	Description
OpenIdConnectConfig	String	Yes	The OpenID Connect configuration items. For more information, see ApiAttributesType.md#OpenIdConnectConfig .
RequestConfig	String	Yes	The configuration items for an API request sent by a consumer to API Gateway. For more information, see ApiAttributesType.md#RequestConfig .
ServiceConfig	String	Yes	The configuration items for an API request sent by API Gateway to a backend service. For more information, see ApiAttributesType.md#ServiceConfig .
RequestParameters	String	Yes	The parameter description for an API request sent by a consumer to API Gateway. For more information, see ApiAttributesType.md#RequestParameters .
ServiceParameters	String	Yes	The parameter description for an API request sent by API Gateway to a backend service. For more information, see ApiAttributesType.md#ServiceParameters .
ServiceParametersMap	String	Yes	The mappings between parameters of a request sent by a consumer to API Gateway and parameters of a request sent by API Gateway to a backend service. For more information, see ApiAttributesType.md#ServiceParametersMap .
ResultType	String	Yes	The format of the response from the backend service. Valid values: JSON, TEXT, BINARY, XML, and HTML.
ResultSample	String	Yes	The sample response from the backend service.
FailResultSample	String	No	The sample error response from the backend service.
ErrorCodeSamples	String	No	The sample error code returned by the backend service. For more information, see ApiAttributesType.md#ErrorCodeSamples .

Response parameters

Name	Type	Description
RequestId	String	The ID of the current API creation request.

Examples

Sample request

```

https://ecs.aliyuncs.com/?Action=ModifyApi
&GroupId=08ae4aa0f95e4321849ee57f4e0b3077
&ApiName=ApiName
&ApiId=8afff6c8c4c6447abb035812e4d66b65
&Visibility=PUBLIC
&Description=Api description
&AuthType=APP
&RequestConfig={"RequestProtocol":"HTTP","RequestHttpMethod":"GET","RequestPath":"/v3/getUserTest/{userId}","BodyFormat":"FORM","PostBodyDescription":""}
&ServiceConfig={"ServiceProtocol":"HTTP","ServiceHttpMethod":"GET","ServiceAddress":"http://www.customerdomain.com","ServiceTimeout":"1000","ServicePath":"/v3/getUserTest/{userId}"}
&RequestParameters=[{"ParameterLocation":{"name":"Head","orderNumber":1},"ParameterType":"Number","Required":"OPTIONAL","isHide":false,"ApiParameterName":"age","DefaultValue":"20","DemoValue":"20","Description":"Age","MinValue":18,"MaxValue":100,"Location":"Head"},{"ParameterLocation":{"name":"Query","orderNumber":2},"ParameterType":"String","Required":"OPTIONAL","isHide":false,"ApiParameterName":"sex","DefaultValue":"boy","DemoValue":"boy","Description":"Gender","EnumValue":"boy,girl","Location":"Query"},{"ParameterLocation":{"name":"Parameter Path","orderNumber":3},"ParameterType":"Number","Required":"REQUIRED","isHide":false,"ApiParameterName":"userId","MaxLength":10,"MinValue":10000000,"MaxValue":100000000,"Location":"Path"},{"ApiParameterName":"CaClientIp","ParameterLocation":{"name":"Head","orderNumber":0},"Location":"Head","ParameterType":"String","Required":"REQUIRED","Description":"Client IP address"},{"ApiParameterName":"constance","ParameterLocation":{"name":"Head","orderNumber":0},"Location":"Head","ParameterType":"String","Required":"REQUIRED","DefaultValue":"constance","Description":"constance"}]
&ServiceParameters=[{"ServiceParameterName":"age","Location":"Head","Type":"Number","ParameterCatalog":"REQUEST"},{"ServiceParameterName":"sex","Location":"Query","Type":"String","ParameterCatalog":"REQUEST"},{"ServiceParameterName":"userId","Location":"Path","Type":"Number","ParameterCatalog":"REQUEST"},{"ServiceParameterName":"clientIp","Location":"Head","Type":"String","ParameterCatalog":"SYSTEM"},{"ServiceParameterName":"constance","Location":"Head","Type":"String","ParameterCatalog":"CONSTANT"}]
&ServiceParametersMap=[{"ServiceParameterName":"age","RequestParameterName":"age"},{"ServiceParameterName":"sex","RequestParameterName":"sex"},{"ServiceParameterName":"userId","RequestParameterName":"userId"},{"ServiceParameterName":"clientIp","RequestParameterName":"CaClientIp"},{"ServiceParameterName":"constance","RequestParameterName":"constance"}]
&ResultType=HTML
&ResultSample=200
&<Common request parameters>

```

Sample responses

- XML format

```

<ModifyApiResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</ModifyApiResponse>

```

- JSON format

```

{
  "RequestId":"6C87A26A-6A18-4B8E-8099-705278381A2C"
}

```

1.11.3. DeployApi

Description

You can call this operation to publish an API to a specified runtime environment.

- This operation is intended for API providers. Only the API that you have defined and published to a runtime environment can be called.
- An API is published to a cluster in under 5 seconds.
- The QPS limit on this operation is 50 per user.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DeployApi.
GroupId	String	Yes	The ID of the API group.
ApiId	String	Yes	The ID of the API.
StageName	String	Yes	The name of the runtime environment. Valid values: • RELEASE. • TEST.
Description	String	Yes	The description of the current publication.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DeployApi
&GroupId=63be9002440b4778a61122f14c2b2bbb
&ApiId=d6f679aeb3be4b91b3688e887ca1fe16
&StageName=release
&Description=for_test1
&<Common request parameters>
```

Sample responses

- XML format

```
<DeployApiResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ015</RequestId>
</DeployApiResponse>
```

- JSON format

```
{
  "RequestId":"CEF72CEB-54B6-4AE8-B225-F876FF7BZ015"
}
```

1.11.4. SwitchApi

Description

You can call this operation to switch the API definition running in the specified runtime environment to a historical version.

- This operation is intended for API providers.
- The historical version can be obtained through the DescribeHistoryApis API.
- Only APIs that have been published more than once have historical versions to switch to.
- This operation can only be performed on running APIs. Use caution when performing this operation because the operation cannot be undone after it has been completed and takes effect within 5 seconds.
- The switch operation is in essence a publish operation, and the reason for this operation must be provided.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to SwitchApi.
GroupId	String	Yes	The ID of the API group.
ApiId	String	Yes	The ID of the API.
StageName	String	Yes	The name of the runtime environment. Valid values: • RELEASE. • TEST.
HistoryVersion	String	Yes	The historical version you want to use.
Description	String	Yes	The description of the switch operation.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=SwitchApi
&GroupId=63be9002440b4778a61122f14c2b2bbb
&ApiId=d6f679aeb3be4b91b3688e887ca1fe16
&StageName=release
&HistoryVersion=20160705104552292
&Description=for_demo
&<Common request parameters>
```

Sample responses

- XML format

```
<SwitchApiResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ001</RequestId>
</SwitchApiResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ001"
}
```

1.11.5. AbolishApi

Description

You can call this operation to unpublish a specified API from a specified runtime environment.

- This operation is intended for API providers and is the opposite of `DeployApi`.
- An API can be unpublished from a specified runtime environment in under 5 seconds.
- An unpublished API cannot be called in the specified runtime environment.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to <code>AbolishApi</code> .
GroupId	String	Yes	The ID of the API group.
ApiId	String	Yes	The ID of the API.
StageName	String	Yes	The name of the runtime environment. Valid values: • <code>RELEASE</code>. • <code>TEST</code>.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=AbolishApi
&GroupId=63be9002440b4778a61122f14c2b2bbb
&ApiId=d6f679aeb3be4b91b3688e887ca1fe16
&StageName=RELEASE
&<Common request parameters>
```

Sample responses

- XML format

```
<AbolishApiResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ016</RequestId>
</AbolishApiResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ016"
}
```

1.11.6. DeleteApi

Description

You can call this operation to delete the definition of a specified API.

- This operation is intended for API providers and cannot be undone after it has been completed.
- An API running in the runtime environment must be unpublished before being deleted.
- The QPS limit on this operation is 50 per user.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DeleteApi.
GroupId	String	Yes	The ID of the API group.
ApiId	String	Yes	The ID of the API.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DeleteApi
&GroupId=63be9002440b4778a61122f14c2b2bbb
&ApiId=d6f679aeb3be4b91b3688e887ca1fe16
&<Common request parameters>
```

Sample responses

- XML format

```
<DeleteApiResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ017</RequestId>
</DeleteApiResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ017"
}
```

1.11.7. DescribeApi

Description

You can call this operation to query API definitions.

- This operation is intended for API providers.
- This operation allows you to query the definition of a specified API.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to <code>DescribeApi</code> .
GroupId	String	Yes	The ID of the API group.
ApiId	String	Yes	The ID of the API.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Name	Type	Description
RegionId	String	The region to which the API belongs.
ApiId	String	The ID of the API.
ApiName	String	The name of the API, which is unique in the group.
GroupId	String	The ID of the API group.
GroupName	String	The name of the API group.
Visibility	String	Indicates whether the API is public. Valid values: - PUBLIC: indicates the API is public. In Apsara Stack, this value is invalid and the visibility of all APIs is fixed as PRIVATE. - PRIVATE: indicates the API is private.
AuthType	String	The security authorization method. Valid values: - APP: Only authorized applications can call the API. - ANONYMOUS: The API can be called anonymously. In such a mode, you must note the following: - Anyone who can obtain this API service information will have the permission to call this API. API Gateway does not authenticate callers and cannot set user-specific throttling policies. If you make this API public, set API-based throttling policies. We do not recommend making APIs with anonymous authentication available in the Alibaba Cloud Marketplace. API Gateway cannot bill callers separately or control the number of calls. Before you add a group containing such APIs to the Marketplace, we recommend that you move them to another group, set their Visibility to PRIVATE, or set their AuthType to APP. - APPOPENID: The third-party OpenID Connect account authentication method is used, allowing only authorized applications to call the API. If this method is selected, the OpenIdConnectConfig parameter is required.
ResultType	String	The format of the response from the backend service. Valid values: JSON, TEXT, BINARY, XML, and HTML.
ResultSample	String	The sample response returned by the backend service.
FailResultSample	String	The sample response returned when the backend service fails.
CreateTime	String	The creation time of the API.
ModifyTime	String	The last modification time of the API.
Description	String	The description of the API.

Name	Type	Description
ErrorCodeSamples	ErrorCodeSample	The sample error code returned by the backend service. For more information, see ApiAttributesType.md#ErrorCodeSamples .
SystemParameters	SystemParameter	The system parameters sent by API Gateway to a backend service. For more information, see ApiAttributesType.md#SystemParameters .
ConstantParameters	ConstantParameter	The constant parameters sent by API Gateway to a backend service. For more information, see ApiAttributesType.md#ConstantParameters .
RequestParametersObject	RequestParameter	The description of parameters of an API request sent by a caller to API Gateway. For more information, see ApiAttributesType.md#RequestParameters .
ServiceParametersObject	ServiceParameter	The description of parameters of an API request sent by API Gateway to a backend service. For more information, see ApiAttributesType.md#ServiceParameters .
ParametersMapObject	ServiceParameterMap	The mappings between parameters of a request sent by a caller to API Gateway and parameters of a request sent by API Gateway to a backend service. For more information, see ApiAttributesType.md#ServiceParametersMap .
DeployedInfos	DeployedInfo	The publishing status of the API. For more information, see ApiAttributesType.md#DeployedInfos .
RequestConfig	RequestConfig	The configuration items of an API request sent by a caller to API Gateway. For more information, see ApiAttributesType.md#RequestConfig .
ServiceConfig	ServiceConfig	The configuration items of an API request sent by API Gateway to a backend service. For more information, see ApiAttributesType.md#ServiceConfig .
OpenIdConnectConfig	OpenIdConnectConfig	The configuration items of the third-party OpenID Connect account authentication method. For more information, see ApiAttributesType.md#OpenIdConnectConfig .

Examples

Sample request

```
https://ecs.aliyuncs.com/?Action=DescribeApi
&GroupId=08ae4aa0f95e4321849ee57f4e0b3077
&ApiId=8afff6c8c4c6447abb035812e4d66b65
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeApiResponse>
```

```

<RequestId>D0FF585F-7966-40CF-BC60-75DB070B23D5</RequestId>
<RegionId>cn-qingdao</RegionId>
<Description>Api description</Description>
<ApiName>ApiName</ApiName>
<CreateTime>2016-07-28T09:50:43Z</CreateTime>
<GroupName>ApiTest</GroupName>
<ModifiedTime>2016-07-28T13:13:12Z</ModifiedTime>
<ServiceParametersObject>
  <ServiceParam>
    <ServiceParameterName>age</ServiceParameterName>
    <Type>Number</Type>
    <Location>head</Location>
  </ServiceParam>
  <ServiceParam>
    <ServiceParameterName>sex</ServiceParameterName>
    <Type>String</Type>
    <Location>query</Location>
  </ServiceParam>
  <ServiceParam>
    <ServiceParameterName>userId</ServiceParameterName>
    <Type>Number</Type>
    <Location>path</Location>
  </ServiceParam>
  <ServiceParam>
    <ServiceParameterName>clientIp</ServiceParameterName>
    <Type>String</Type>
    <Location>head</Location>
  </ServiceParam>
  <ServiceParam>
    <ServiceParameterName>constance</ServiceParameterName>
    <Type>String</Type>
    <Location>head</Location>
  </ServiceParam>
</ServiceParametersObject>
<ConstantParameters>
  <ConstantParameter>
    <ServiceParameterName>constance</ServiceParameterName>
    <Description>constance</Description>
    <Location>HEAD</Location>
    <ConstantValue>constance</ConstantValue>
  </ConstantParameter>
</ConstantParameters>
<GroupId>08ae4aa0f95e4321849ee57f4e0b3077</GroupId>
<SystemParameters>
  <SystemParameter>
    <ServiceParameterName>clientIp</ServiceParameterName>
    <Description>Client IP address</Description>
    <DemoValue>192.168.1.1</DemoValue>
    <Location>HEAD</Location>
    <ParameterName>CaClientIp</ParameterName>
  </SystemParameter>
</SystemParameters>
<RequestParametersObject>
  <RequestParam>

```

```
<Required>OPTIONAL</Required>
<MinValue>18</MinValue>
<Description>Age</Description>
<DemoValue>20</DemoValue>
<ParameterType>NUMBER</ParameterType>
<ApiParameterName>age</ApiParameterName>
<DocShow>PUBLIC</DocShow>
<DefaultValue>20</DefaultValue>
<Location>HEAD</Location>
<MaxValue>100</MaxValue>
<DocOrder>0</DocOrder>
</RequestParam>
<RequestParam>
  <Required>OPTIONAL</Required>
  <Description>Gender</description>
  <DemoValue>boy</DemoValue>
  <ParameterType>STRING</ParameterType>
  <ApiParameterName>sex</ApiParameterName>
  <DocShow>PUBLIC</DocShow>
  <DefaultValue>boy</DefaultValue>
  <Location>QUERY</Location>
  <EnumValue>boy,girl</EnumValue>
  <DocOrder>0</DocOrder>
</RequestParam>
<RequestParam>
  <Required>REQUIRED</Required>
  <MinValue>10000000</MinValue>
  <ParameterType>NUMBER</ParameterType>
  <ApiParameterName>userId</ApiParameterName>
  <DocShow>PUBLIC</DocShow>
  <Location>regionid</Location>
  <MaxValue>100000000</MaxValue>
  <DocOrder>0</DocOrder>
</RequestParam>
</RequestParametersObject>
<DeployedInfos>
  <DeployedInfo>
    <DeployedStatus>NONDEPLOYED</DeployedStatus>
    <StageName>TEST</StageName>
  </DeployedInfo>
  <DeployedInfo>
    <DeployedStatus>NONDEPLOYED</DeployedStatus>
    <StageName>RELEASE</StageName>
  </DeployedInfo>
</DeployedInfos>
<ServiceConfig>
  <ServiceProtocol>HTTP</ServiceProtocol>
  <ServiceTimeout>1000</ServiceTimeout>
  <ServiceAddress>http://www.customerdomain.com</ServiceAddress>
  <ServicePath>/v3/getUserTest/{userId}</ServicePath>
  <ServiceHttpMethod>GET</ServiceHttpMethod>
  <Mock>FALSE</Mock>
</ServiceConfig>
<RequestId>D0FF585F-7966-40CF-BC60-75DB070B23D5</RequestId>
```

```

<RegionId>cn-qingdao</RegionId>
<RequestConfig>
  <RequestHttpMethod>GET</RequestHttpMethod>
  <RequestProtocol>HTTP</RequestProtocol>
  <RequestPath>/v3/getUserTest/[userId]</RequestPath>
</RequestConfig>
<Visibility>PUBLIC</Visibility>
<ParametersMapObject>
  <ServiceParameterMap>
    <ServiceParameterName>sex</ServiceParameterName>
    <RequestParameterName>sex</RequestParameterName>
  </ServiceParameterMap>
  <ServiceParameterMap>
    <ServiceParameterName>age</ServiceParameterName>
    <RequestParameterName>age</RequestParameterName>
  </ServiceParameterMap>
  <ServiceParameterMap>
    <ServiceParameterName>userId</ServiceParameterName>
    <RequestParameterName>userId</RequestParameterName>
  </ServiceParameterMap>
</ParametersMapObject>
<ErrorCodeSamples>
  <ErrorCodeSample>
    <Code>400</Code>
    <Message>Missing the parameter UserId</Message>
    <Description>The UserId parameter is missing from the request</Description>
  </ErrorCodeSample>
</ErrorCodeSamples>
<ApiId>8afff6c8c4c6447abb035812e4d66b65</ApiId>
<AuthType>APP</AuthType>
<ResultType>HTML</ResultType>
<ResultSample>200</ResultSample>
<FailResultSample>400</FailResultSample>
<OpenIdConnectConfig>
  <publicKey>EB1837F8693CCED0BF750B3AD48467BEB569E780A14591CF92</publicKey>
  <openIdApiType>IDTOKEN</openIdApiType>
  <publicKeyId>88483727556929326703309904351185815489</publicKeyId>
</OpenIdConnectConfig>
</DescribeApiResponse>

```

- JSON format

```

{
  "RequestId": "D0FF585F-7966-40CF-BC60-75DB070B23D5",
  "RegionId": "cn-qingdao",
  "Description": "billingTest001",
  "ApiName": "billingTest001",
  "CreatedTime": "2016-07-01T09:18:20Z",
  "GroupName": "billingTest",
  "ModifiedTime": "2016-07-21T03:52:12Z",
  "ServiceParametersObject": {
    "ServiceParam": [
      {
        "ServiceParameterName": "headerParam",
        "Type": "String",

```

```
        "Location": "head"
      },
      {
        "ServiceParameterName": "queryparam",
        "Type": "String",
        "Location": "query"
      },
      {
        "ServiceParameterName": "NumberParam",
        "Type": "Number",
        "Location": "query"
      },
      {
        "ServiceParameterName": "type",
        "Type": "String",
        "Location": "path"
      },
      {
        "ServiceParameterName": "clientId",
        "Type": "String",
        "Location": "head"
      },
      {
        "ServiceParameterName": "constantParam",
        "Type": "String",
        "Location": "query"
      }
    ]
  },
  "ConstantParameters": {
    "ConstantParameter": [
      {
        "ServiceParameterName": "constantParam",
        "Description": "constant",
        "Location": "QUERY",
        "ConstantValue": "constant"
      }
    ]
  },
  "GroupId": "4a3f3050b9c5469bb685bdd29e571be1",
  "SystemParameters": {
    "SystemParameter": [
      {
        "ServiceParameterName": "clientId",
        "Description": "Client IP address",
        "DemoValue": "192.168.1.1",
        "Location": "HEAD",
        "ParameterName": "CaClientId"
      }
    ]
  },
  "RequestParametersObject": {
    "RequestParam": [
      {
```

```

    "Required": "OPTIONAL",
    "Description": "head param",
    "DemoValue": "headparm",
    "ParameterType": "STRING",
    "ApiParameterName": "headerParam",
    "DocShow": "PUBLIC",
    "DefaultValue": "",
    "Location": "HEAD",
    "EnumValue": "head",
    "DocOrder": 0
  },
  {
    "Required": "REQUIRED",
    "ParameterType": "STRING",
    "ApiParameterName": "queryparam",
    "DocShow": "PUBLIC",
    "DefaultValue": "",
    "Location": "QUERY",
    "DocOrder": 0
  },
  {
    "Required": "OPTIONAL",
    "MinValue": 1,
    "Description": "number param",
    "DemoValue": "10",
    "ParameterType": "NUMBER",
    "ApiParameterName": "NumberParam",
    "DocShow": "PUBLIC",
    "DefaultValue": "10",
    "Location": "QUERY",
    "MaxValue": 100,
    "DocOrder": 0
  },
  {
    "Required": "REQUIRED",
    "ParameterType": "STRING",
    "ApiParameterName": "type",
    "DocShow": "PUBLIC",
    "Location": "PATH",
    "DocOrder": 0
  }
]
},
"DeployedInfos": {
  "DeployedInfo": [
    {
      "DeployedStatus": "NONDEPLOYED",
      "StageName": "TEST",
    },
    {
      "DeployedStatus": "DEPLOYED",
      "StageName": "RELEASE",
      "EffectiveVersion": "20160721115223375"
    }
  ]
}

```

```
]
},
"ServiceConfig": {
  "ServiceProtocol": "HTTP",
  "ServiceTimeout": 10000,
  "ServiceAddress": "http://120.55.69.157:8080",
  "ServicePath": "/web/cloudapi/[type]",
  "ServiceHttpMethod": "POST",
  "Mock": "CLOSED"
},
"RequestId": "415F037A-94C2-4100-B17A-F3C514CA1391",
"RegionId": "cn-qingdao",
"RequestConfig": {
  "RequestHttpMethod": "POST",
  "RequestProtocol": "HTTP",
  "PostBodyDescription": "fwefwef",
  "BodyFormat": "STREAM",
  "RequestPath": "/api/billing/test/[type]"
},
"Visibility": "PUBLIC",
"ParametersMapObject": {
  "ServiceParameterMap": [
    {
      "ServiceParameterName": "headerParam",
      "RequestParameterName": "headerParam"
    },
    {
      "ServiceParameterName": "queryparam",
      "RequestParameterName": "queryparam"
    },
    {
      "ServiceParameterName": "NumberParam",
      "RequestParameterName": "NumberParam"
    },
    {
      "ServiceParameterName": "type",
      "RequestParameterName": "type"
    }
  ]
},
"ErrorCodeSamples": {
  "ErrorCodeSample": [
    {
      "Code": "400",
      "Message": "Missing the parameter UserId",
      "Description": "The UserId parameter is missing from the request"
    }
  ]
},
"ApId": "e77fd9257b1d436a806fe23c649300a0",
"AuthType": "APP",
"ResultType": "JSON",
"ResultSample": "fwef",
"FailResultSample": "400",
"CloudGatewayConfig": {
```



```

"OpenIdConnectConfig": {
  "publicKey": "EB1837F8693CCED0BF750B3AD48467BEB569E780A14591CF92",
  "openIdApiType": "IDTOKEN",
  "publicKeyId": "88483727556929326703309904351185815489"
}
}

```

1.11.8. DescribeApiDoc

Description

You can call this operation to query documentation of a specified API.

- For API callers, the specified API must be a public or authorized private API that has been published to a runtime environment.
- When you call this operation as an API caller, the service information, parameter definitions, and other details of the API you specify are returned.
- When you call this operation as an API provider, the definition of the specified API running in the specified runtime environment is returned. The returned definition takes effect in the runtime environment, and may be different from the definition of the API you modify.
- Before you call this operation as an API provider, ensure that the API to be queried is a public one or that your application has been authorized to call the API, because authentication on API callers is required.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeApiDoc.
GroupId	String	Yes	The ID of the API group.
ApiId	String	Yes	The ID of the API.
StageName	String	No	The name of the runtime environment. Valid values: • RELEASE. • TEST. If this parameter is not specified, the default value is release.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
RegionId	String	The region to which the API belongs.
GroupId	String	The ID of the API group.

Name	Type	Description
GroupName	String	The name of the API group.
StageName	String	The name of the runtime environment. Valid values: • RELEASE. • TEST.
ApiId	String	The ID of the API.
ApiName	String	The API name.
Description	String	The description of the API.
Visibility	String	Indicates whether the API is public. Valid values: PUBLIC and PRIVATE.
AuthType	String	The security authentication method. Valid values: APP, ANONYMOUS, and APPOPENID, indicating respectively Alibaba Cloud application authentication, anonymous authentication, and third-party OpenID Connect account authentication.
ResultType	String	The response type.
ResultSample	String	The sample response.
FailResultSample	String	The sample response returned when the backend service fails.
ErrorCodeSamples	ErrorCodeSample	The sample error code returned by the backend service. For more information, see ApiAttributesType.md#ErrorCodeSamples.
RequestConfig	RequestConfig	The returned API frontend definition information. It is an array consisting of RequestConfig data.
RequestParameters	RequestParameter	The returned frontend input parameters in the API. It is an array consisting of RequestParameter data.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DescribeApiDoc
&GroupId=0009db9c828549768a200320714b8930
&ApiId=3b81fd160f5645e097cc8855d75a1cf6
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeApiDocResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ014</RequestId>
  <RegionId>cn-qingdao</RegionId>
  <GroupId>0009db9c828549768a200320714b8930</GroupId>
```

```
<GroupName>myGroup2</GroupName>
<StageName>RELEASE</StageName>
<Apild>3b81fd160f5645e097cc8855d75a1cf6</Apild>
<ApiName>creatobject</ApiName>
<Description>Create an object</Description>
<Visibility>public</Visibility>
<AuthType>APP</AuthType>
<ResultType>application/json</ResultType>
<ResultSample></ResultSample>
<FailResultSample></FailResultSample>
<ErrorCodeSamples>
  <ErrorCodeSample>
    <Code>400</Code>
    <Message>Missing the parameter UserId</Message>
    <Description>The UserId parameter is missing from the request</Description>
  </ErrorCodeSample>
</ErrorCodeSamples>
<RequestConfig>
  <RequestProtocol>HTTP</RequestProtocol>
  <RequestHttpMethod>GET</RequestHttpMethod>
  <RequestPath>/mypath/creatobject</RequestPath>
  <BodyFormat>FORM</BodyFormat>
  <PostBodyDescription>Object</PostBodyDescription>
</RequestConfig>
<RequestParameters>
  <RequestParameter>
    <ApiParameterName>RequestKey1</ApiParameterName>
    <Location>QUERY</Location>
    <ParameterType>String</ParameterType>
    <Required>REQUIRED</Required>
    <DefaultValue></DefaultValue>
    <DemoValue>demo1</DemoValue>
    <MaxValue></MaxValue>
    <MinValue></MinValue>
    <MaxLength>100</MaxLength>
    <MinLength>3</MinLength>
    <RegularExpression></RegularExpression>
    <JsonScheme></JsonScheme>
    <EnumValue></EnumValue>
    <DocShow>PUBLIC</DocShow>
    <DocOrder>1</DocOrder>
    <Description>Desc1</Description>
  </RequestParameter>
  <RequestParameter>
    <ApiParameterName>RequestKey2</ApiParameterName>
    <Location>QUERY</Location>
    <ParameterType>Number</ParameterType>
    <Required>OPTIONAL</Required>
    <DefaultValue></DefaultValue>
    <DemoValue>12</DemoValue>
    <MaxValue>120</MaxValue>
    <MinValue>100</MinValue>
    <MaxLength></MaxLength>
    <MinLength></MinLength>
```

```
<RegularExpression></RegularExpression>
<JsonScheme></JsonScheme>
<EnumValue></EnumValue>
<DocShow>PUBLIC</DocShow>
<DocOrder>2</DocOrder>
<Description>Desc2</Description>
</RequestParameter>
</RequestParameters>
</DescribeApiDocResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ014",
  "RegionId": "cn-qingdao",
  "GroupId": "0009db9c828549768a200320714b8930",
  "GroupName": "myGroup2",
  "StageName": "RELEASE",
  "ApiId": "3b81fd160f5645e097cc8855d75a1cf6",
  "ApiName": "creatobject",
  "Description": "Create an object",
  "Visibility": "public",
  "AuthType": "APP",
  "ResultType": "application/json",
  "ResultSample": "200",
  "FailResultSample": "400",
  "ErrorCodeSamples": {
    "ErrorCodeSample": [
      {
        "Code": "400",
        "Message": "Missing the parameter UserId",
        "Description": "The UserId parameter is missing from the request"
      }
    ]
  },
  "RequestConfig": {
    "RequestProtocol": "HTTP",
    "RequestHttpMethod": "GET",
    "RequestPath": "/mypath/creatobject",
    "BodyFormat": "FORM",
    "PostBodyDescription": "Object"
  },
  "RequestParameters": {
    "RequestParameter": [
      {
        "ApiParameterName": "RequestKey1",
        "Location": "QUERY",
        "ParameterType": "String",
        "Required": "REQUIRED",
        "DemoValue": "demo1",
        "MaxLength": "100",
        "MinLength": "3",
        "DocShow": "PUBLIC",
        "DocOrder": "1",
        "Description": "Desc1"
      }
    ]
  }
}
```

```

    "Description": "Desc1"
  },
  {
    "ApiParameterName": "RequestKey2",
    "Location": "QUERY",
    "ParameterType": "Number",
    "Required": "OPTIONAL",
    "DemoValue": "12",
    "MaxValue": "120",
    "MinValue": "100",
    "DocShow": "PUBLIC",
    "DocOrder": "2",
    "Description": "Desc2"
  }
]
}
}

```

1.11.9. DescribeApis

Description

You can call this operation to query the list of APIs.

- This operation is intended for API providers.
- The list of all APIs under the definition and their brief information are returned.
- Note: This API returns the most recently edited API definitions. These may be different from the definitions of those APIs currently published to the runtime environment.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeApis.
GroupId	String	No	The ID of the API group.
ApiId	String	No	The ID of the API.
ApiName	String	No	The name of the API.
PageSize	Integer	No	The number of rows per page. The maximum value is 100. The default value is 10.
PageNumber	Integer	No	The specific page number that you want to query. The default value is 1. The starting number is 1.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
TotalCount	Integer	The total number of returned results.
PageNumber	Integer	The specified page number.
PageSize	Integer	The specified number of rows returned per page.
ApiSummarys	ApiSummary	The returned API definition. It is an array consisting of ApiSummary data.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DescribeApis
&ApiName=weather
&pageSize=15
&pageNumber=3
&<Common request parameters>
```

Sample responses

- XML format

```

<DescribeApisResponse>
  <ApiSummaries>
    <ApiSummary>
      <RegionId>cn-qingdao</RegionId>
      <GroupId>63be9002440b4778a61122f14c2b2bbb</GroupId>
      <GroupName>myGroup3</GroupName>
      <ApId>c076144d7878437b8f82fb85890ce6a0</ApId>
      <ApiName>Query the list of objects</ApiName>
      <Visibility>public</Visibility>
      <Description>Query the list of objects by pages</Description>
      <CreateTime>2016-06-20T18:18:25Z</CreateTime>
      <ModifiedTime>2016-07-23T08:28:48Z</ModifiedTime>
    </ApiSummary>
    <ApiSummary>
      <RegionId>cn-qingdao</RegionId>
      <GroupId>1084f9034c744137901057206b39d2b6</GroupId>
      <GroupName>myGroup2</GroupName>
      <ApId>5af418828f0344a3b588c0cc1331a3bc</ApId>
      <ApiName>Create an object</ApiName>
      <Visibility>public</Visibility>
      <Description>Create an object</Description>
      <CreateTime>2016-05-20T18:18:25Z</CreateTime>
      <ModifiedTime>2016-07-23T08:28:48Z</ModifiedTime>
    </ApiSummary>
  </ApiSummaries>
  <PageNumber>3</PageNumber>
  <PageSize>15</PageSize>
  <TotalCount>32</TotalCount>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ002</RequestId>
</DescribeApisResponse>

```

- JSON format

```
{
  "ApiSummarys": {
    "ApiSummary": [
      {
        "RegionId": "cn-qingdao",
        "GroupId": "63be9002440b4778a61122f14c2b2bbb",
        "GroupName": "myGroup3",
        "ApId": "c076144d7878437b8f82fb85890ce6a0",
        "ApiName": "Query the list of objects",
        "Visibility": "public",
        "Description": "Query the list of objects by pages",
        "CreatedTime": "2016-06-20T18:18:25Z",
        "ModifiedTime": "2016-07-23T08:28:48Z"
      },
      {
        "RegionId": "cn-qingdao",
        "GroupId": "1084f9034c744137901057206b39d2b6",
        "GroupName": "myGroup2",
        "ApId": "5af418828f0344a3b588c0cc1331a3bc",
        "ApiName": "Create an object",
        "Visibility": "public",
        "Description": "Create an object",
        "CreatedTime": "2016-05-20T18:18:25Z",
        "ModifiedTime": "2016-07-23T08:28:48Z"
      }
    ]
  },
  "PageNumber": "3",
  "PageSize": "15",
  "TotalCount": "32",
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ002"
}
```

1.11.10. DescribeApiHistory

Description

You can call this operation to query the details of a specified historical version of a specified API definition.

- This operation is intended for API providers.
- API Gateway records the time and definition of an API every time the API is published. You can use the version number obtained from other operations to query definition details at a certain publication.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeApiHistory.
GroupId	String	Yes	The ID of the API group.

Name	Type	Required	Description
ApiId	String	Yes	The ID of the API.
StageName	String	Yes	The name of the runtime environment. Valid values: • RELEASE. • TEST.
HistoryVersion	String	Yes	The specified historical version number that you want to query. This can be obtained through the DescribeHistoryApis API.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
RegionId	String	The region to which the API belongs.
GroupId	String	The ID of the API group.
GroupName	String	The name of the API group.
StageName	String	The name of the runtime environment. Valid values: • RELEASE. • TEST.
ApiId	String	The ID of the API.
ApiName	String	The name of the API.
Description	String	The description of the API.
HistoryVersion	String	The version of the API definition.
Status	String	Indicates whether the API of the corresponding version is valid. Valid values: ENABLE (valid) and DISABLE (invalid).
Visibility	String	Indicates whether the API is public. Valid values: PUBLIC and PRIVATE.
AuthType	String	The security authentication method. Valid values: APP, ANONYMOUS, and APPOPENID, indicating respectively Alibaba Cloud application authentication, anonymous authentication, and third-party OpenID Connect account authentication.
ResultType	String	The response type.
ResultSample	String	The sample response.
FailResultSample	String	The sample response returned when the backend service fails.

Name	Type	Description
DeployedTime	String	The publishing time (UTC) of the API.
ErrorCodeSamples	ErrorCodeSample	The sample error code returned by the backend service. For more information, see ApiAttributesType.md#ErrorCodeSamples.
RequestConfig	RequestConfig	The returned API frontend definition information. It is an array consisting of RequestConfig data under a definition.
ServiceConfig	ServiceConfig	The returned information on the backend service called through the API. It is an array consisting of ServiceConfig data.
SystemParameters	SystemParameter	The returned system parameters input when a backend service is called through the API. It is an array consisting of SystemParameter data.
ConstantParameters	ConstantParameter	The returned constant parameters input when a backend service is called through the API. It is an array consisting of ConstantParameter data.
RequestParameters	RequestParameter	The returned frontend input parameters in the API. It is an array consisting of RequestParameter data.
ServiceParameters	ServiceParameter	The returned constant parameters input when a backend service is called through the API. It is an array consisting of ServiceParameter data.
ServiceParametersMap	ServiceParameterMap	The returned mappings between frontend and backend parameters in the API. It is an array consisting of ServiceParameterMap data.
OpenIdConnectConfig	OpenIdConnectConfig	The configuration items of the third-party OpenID Connect account authentication method. For more information, see ApiAttributesType.md#OpenIdConnectConfig.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DescribeApiHistory
&GroupId=0009db9c828549768a200320714b8930
&ApiId=3b81fd160f5645e097cc8855d75a1cf6
&StageName=RELEASE
&HistoryVersion=20160314220059844
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeApiHistoryResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ004</RequestId>
  <RegionId>cn-qingdao</RegionId>
  <GroupId>0009db9c828549768a200320714b8930</GroupId>
  <GroupName>myGroup2</GroupName>
  <StageName>RF1 FASF</StageName>
```

```

<StageName>RELEASE/</StageName>
<ApiId>3b81fd160f5645e097cc8855d75a1cf6</ApiId>
<ApiName>creatobject</ApiName>
<Description>Create an object</Description>
<HistoryVersion>20160314220059844</HistoryVersion>
<Status>DISABLE</Status>
<Visibility>public</Visibility>
<AuthType>APP</AuthType>
<ResultType>application/json</ResultType>
<ResultSample></ResultSample>
<FailResultSample></FailResultSample>
<DeployedTime>2016-07-23T08:28:48Z</DeployedTime>
<RequestConfig>
  <RequestProtocol>HTTP</RequestProtocol>
  <RequestHttpMethod>GET</RequestHttpMethod>
  <RequestPath>/mypath/creatobject</RequestPath>
  <BodyFormat>FORM</BodyFormat>
  <PostBodyDescription>Object</PostBodyDescription>
</RequestConfig>
<ServiceConfig>
  <ServiceProtocol>HTTP/HTTPS</ServiceProtocol>
  <ServiceAddress>http://api.a.com:8080</ServiceAddress>
  <ServiceHttpMethod>GET</ServiceHttpMethod>
  <ServicePath>/object/add</ServicePath>
  <ServiceTimeout>2000</ServiceTimeout>
</ServiceConfig>
<SystemParameters>
  <SystemParameter>
    <ParameterName>CaRequestId</ParameterName>
    <ServiceParameterName>RequestId</ServiceParameterName>
    <Location>HEAD</Location>
    <DemoValue>0A964636-F7A3-4F1A-92D7-135584A6397F</DemoValue>
    <Description>Request ID</Description>
  </SystemParameter>
  <SystemParameter>
    <ParameterName>CaAppId</ParameterName>
    <ServiceParameterName>AppId</ServiceParameterName>
    <Location>QUERY</Location>
    <DemoValue>0A964636-F7A3-4F1A-92D7-135584A6398F</DemoValue>
    <Description>Requester application ID</Description>
  </SystemParameter>
</SystemParameters>
<ConstantParameters>
  <ConstantParameter>
    <ServiceParameterName>ConstantKey1</ServiceParameterName>
    <ConstantValue>helloworld</ConstantValue>
    <Location>QUERY</Location>
    <Description>Desc</Description>
  </ConstantParameter>
</ConstantParameters>
<RequestParameters>
  <RequestParameter>
    <ApiParameterName>RequestKey1</ApiParameterName>
    <Location>QUERY</Location>
    <ParameterType>String</ParameterType>

```

```
<Required>REQUIRED</Required>
<DefaultValue></DefaultValue>
<DemoValue>demo1</DemoValue>
<MaxValue></MaxValue>
<MinValue></MinValue>
<MaxLength>100</MaxLength>
<MinLength>3</MinLength>
<RegularExpression></RegularExpression>
<JsonScheme></JsonScheme>
<EnumValue></EnumValue>
<DocShow>PUBLIC</DocShow>
<DocOrder>1</DocOrder>
<Description>Desc1</Description>
</RequestParam>
<RequestParam>
  <ApiParameterName>RequestKey2</ApiParameterName>
  <Location>QUERY</Location>
  <ParameterType>Number</ParameterType>
  <Required>OPTIONAL</Required>
  <DefaultValue></DefaultValue>
  <DemoValue>12</DemoValue>
  <MaxValue>120</MaxValue>
  <MinValue>100</MinValue>
  <MaxLength></MaxLength>
  <MinLength></MinLength>
  <RegularExpression></RegularExpression>
  <JsonScheme></JsonScheme>
  <EnumValue></EnumValue>
  <DocShow>PUBLIC</DocShow>
  <DocOrder>2</DocOrder>
  <Description>Desc2</Description>
</RequestParam>
</RequestParameters>
<ErrorCodeSamples>
  <ErrorCodeSample>
    <Code>400</Code>
    <Message>Missing the parameter UserId</Message>
    <Description>The UserId parameter is missing from the request</Description>
  </ErrorCodeSample>
</ErrorCodeSamples>
<ServiceParameters>
  <ServiceParameter>
    <ServiceParameterName>ServiceKey1</ServiceParameterName>
    <Location>QUERY</Location>
    <ParameterType>String</ParameterType>
  </ServiceParameter>
  <ServiceParameter>
    <ServiceParameterName>ServiceKey2</ServiceParameterName>
    <Location>QUERY</Location>
    <ParameterType>Number</ParameterType>
  </ServiceParameter>
</ServiceParameters>
<ServiceParametersMap>
  <ServiceParameterMap>
```

```

    <ServiceParameterName>RequestKey1</ServiceParameterName>
    <RequestParameterName>ServiceKey1</RequestParameterName>
  </ServiceParameterMap>
  <ServiceParameterMap>
    <ServiceParameterName>RequestKey2</ServiceParameterName>
    <RequestParameterName>ServiceKey2</RequestParameterName>
  </ServiceParameterMap>
</ServiceParametersMap>
<OpenIdConnectConfig>
  <publicKey>EB1837F8693CCED0BF750B3AD48467BEB569E780A14591CF92</publicKey>
  <openIdApiType>IDTOKEN</openIdApiType>
  <publicKeyId>88483727556929326703309904351185815489</publicKeyId>
</OpenIdConnectConfig>
</DescribeApiHistoryResponse>

```

- JSON format

```

{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ004",
  "RegionId": "cn-qingdao",
  "GroupId": "0009db9c828549768a200320714b8930",
  "GroupName": "myGroup2",
  "StageName": "RELEASE",
  "ApiId": "3b81fd160f5645e097cc8855d75a1cf6",
  "ApiName": "creatobject",
  "Description": "Create an object",
  "HistoryVersion": "20160314220059844",
  "Status": "DISABLE",
  "Visibility": "public",
  "AuthType": "APP",
  "ResultType": "application/json",
  "ResultSample": "200",
  "FailResultSample": "400",
  "DeployedTime": "2016-07-23T08:28:48Z",
  "RequestConfig": {
    "RequestProtocol": "HTTP",
    "RequestHttpMethod": "GET",
    "RequestPath": "/mypath/creatobject",
    "BodyFormat": "FORM",
    "PostBodyDescription": "Object"
  },
  "ServiceConfig": {
    "ServiceProtocol": "HTTP/HTTPS",
    "ServiceAddress": "http://api.a.com:8080",
    "ServiceHttpMethod": "GET",
    "ServicePath": "/object/add",
    "ServiceTimeout": "2000"
  },
  "SystemParameters": {
    "SystemParameter": [
      {
        "ParameterName": "CaRequestId",
        "ServiceParameterName": "RequestId",
        "Location": "HEAD",
        "DefaultValue": "0A064626-57A2-4E1A-92D7-135584A6307E"
      }
    ]
  }
}

```

```
    "DemoValue": "0A964636-F7A3-4F1A-92D7-135584A6398F",
    "Description": "Request ID"
  },
  {
    "ParameterName": "CaAppId",
    "ServiceParameterName": "AppId",
    "Location": "QUERY",
    "DemoValue": "0A964636-F7A3-4F1A-92D7-135584A6398F",
    "Description": "Requester application ID"
  }
]
},
"ConstantParameters": {
  "ConstantParameter": {
    "ServiceParameterName": "ConstantKey1",
    "ConstantValue": "helloworld",
    "Location": "QUERY",
    "Description": "Desc"
  }
},
"RequestParameters": {
  "RequestParameter": [
    {
      "ApiParameterName": "RequestKey1",
      "Location": "QUERY",
      "ParameterType": "String",
      "Required": "REQUIRED",
      "DemoValue": "demo1",
      "MaxLength": "100",
      "MinLength": "3",
      "DocShow": "PUBLIC",
      "DocOrder": "1",
      "Description": "Desc1"
    },
    {
      "ApiParameterName": "RequestKey2",
      "Location": "QUERY",
      "ParameterType": "Number",
      "Required": "OPTIONAL",
      "DemoValue": "12",
      "MaxValue": "120",
      "MinValue": "100",
      "DocShow": "PUBLIC",
      "DocOrder": "2",
      "Description": "Desc2"
    }
  ]
},
"ErrorCodeSamples": {
  "ErrorCodeSample": [
    {
      "Code": "400",
      "Message": "Missing the parameter UserId",
      "Description": "The UserId parameter is missing from the request"
    }
  ]
}
```

```
{
  },
  ],
  "ServiceParameters": {
    "ServiceParameter": [
      {
        "ServiceParameterName": "ServiceKey1",
        "Location": "QUERY",
        "ParameterType": "String"
      },
      {
        "ServiceParameterName": "ServiceKey2",
        "Location": "QUERY",
        "ParameterType": "Number"
      }
    ]
  },
  "ServiceParametersMap": {
    "ServiceParameterMap": [
      {
        "ServiceParameterName": "RequestKey1",
        "RequestParameterName": "ServiceKey1"
      },
      {
        "ServiceParameterName": "RequestKey2",
        "RequestParameterName": "ServiceKey2"
      }
    ]
  },
  "OpenIdConnectConfig": {
    "publicKey": "EB1837F8693CCED0BF750B3AD48467BEB569E780A14591CF92",
    "openIdApiType": "IDTOKEN",
    "publicKeyId": "88483727556929326703309904351185815489"
  }
}
```

1.11.11. DescribeApiHistories

Description

You can call this operation to query the list of historical versions of a specified API.

- This operation is intended for API providers. Only APIs which have been published have a historical version record.
- This operation allows you to obtain the API historical versions which can be used to call other APIs.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeApisHistories.

Name	Type	Required	Description
GroupId	String	Yes	The ID of the API group.
ApiId	String	No	The ID of the API.
ApiName	String	No	The name of the API.
StageName	String	No	The name of the runtime environment. Valid values: • RELEASE. • TEST.
PageSize	Integer	No	The number of rows per page. The maximum value is 100. The default value is 10.
PageNumber	Integer	No	The specific page number that you want to query. The default value is 1. The starting number is 1.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
TotalCount	Integer	The total number of returned results.
PageNumber	Integer	The specified page number.
PageSize	Integer	The specified number of rows returned per page.
ApiHistItems	ApiHistItem	The returned API information. It is an array consisting of ApiHistItem data.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DescribeApiHistories
&ApiName=weather
&pageSize=15
&pageNumber=3
&<Common request parameters>
```

Sample responses

- XML format


```
<DescribeApiHistoriesResponse>
  <ApiHistItems>
    <ApiHistItem>
      <RegionId>cn-qingdao</RegionId>
      <GroupId>63be9002440b4778a61122f14c2b2bbb</GroupId>
      <GroupName>myGroup3</GroupName>
      <ApiId>c076144d7878437b8f82fb85890ce6a0</ApiId>
      <ApiName>Query the list of objects</ApiName>
      <StageName>release</StageName>
      <HistoryVersion>20160705104552292</HistoryVersion>
      <Status>DISABLE</Status>
      <Description>Query the list of objects by pages</Description>
      <DeployedTime>2016-07-23T08:28:48Z</DeployedTime>
    </ApiHistItem>
    <ApiHistItem>
      <RegionId>cn-qingdao</RegionId>
      <GroupId>1084f9034c744137901057206b39d2b6</GroupId>
      <GroupName>myGroup2</GroupName>
      <ApiId>5af418828f0344a3b588c0cc1331a3bc</ApiId>
      <ApiName>Create an object</ApiName>
      <StageName>release</StageName>
      <HistoryVersion>20160705104552393</HistoryVersion>
      <Status>DISABLE</Status>
      <Description>Create an object</Description>
      <DeployedTime>2016-07-20T08:28:48Z</DeployedTime>
    </ApiHistItem>
  </ApiHistItems>
  <PageNumber>3</PageNumber>
  <PageSize>15</PageSize>
  <TotalCount>32</TotalCount>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ003</RequestId>
</DescribeApiHistoriesResponse>
```

- JSON format

```
{
  "ApiHisItems": {
    "ApiHisItem": [
      {
        "RegionId": "cn-qingdao",
        "GroupId": "63be9002440b4778a61122f14c2b2bbb",
        "GroupName": "myGroup3",
        "ApId": "c076144d7878437b8f82fb85890ce6a0",
        "ApiName": "Query the list of objects",
        "StageName": "release",
        "HistoryVersion": "20160705104552292",
        "Status": "DISABLE",
        "Description": "Query the list of objects by pages",
        "DeployedTime": "2016-07-23T08:28:48Z"
      },
      {
        "RegionId": "cn-qingdao",
        "GroupId": "1084f9034c744137901057206b39d2b6",
        "GroupName": "myGroup2",
        "ApId": "5af418828f0344a3b588c0cc1331a3bc",
        "ApiName": "Create an object",
        "StageName": "release",
        "HistoryVersion": "20160705104552393",
        "Status": "DISABLE",
        "Description": "Create an object",
        "DetachedTime": "2014-07-23T08:28:48Z",
      }
    ]
  },
  "PageNumber": 3,
  "PageSize": 15,
  "TotalCount": 32,
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ003"
}
```

1.11.12. DescribeDeployedApi

Description

You can call this operation to query the running definition of an API in a specified runtime environment.

- This operation is intended for API providers.
- This operation allows you to query the API definition that has been published to and is running in a specified environment. This definition may be different from the API definition being modified. A modified API definition can overwrite the definition running in a runtime environment only after the modified definition is published to the runtime environment.

Request parameters

Name	Type	Required	Description
------	------	----------	-------------

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeDeployedApi.
GroupId	String	Yes	The ID of the API group.
ApiId	String	Yes	The ID of the API.
StageName	String	Yes	The name of the runtime environment. Valid values: • RELEASE. • TEST.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
RegionId	String	The region to which the API belongs.
GroupId	String	The ID of the API group.
GroupName	String	The name of the API group.
StageName	String	The name of the runtime environment. Valid values: • RELEASE. • TEST.
ApiId	String	The ID of the API.
ApiName	String	The name of the API.
Description	String	The description of the API.
Visibility	String	Indicates whether the API is public. Valid values: PUBLIC and PRIVATE.
AuthType	String	The security authentication method. Valid values: APP, ANONYMOUS, and APPOPENID, indicating respectively Alibaba Cloud application authentication, anonymous authentication, and third-party OpenID Connect account authentication.
ResultType	String	The response type.
ResultSample	String	The sample response.
FailResultSample	String	The sample response returned when the backend service fails.
DeployedTime	String	The publishing time (UTC) of the API.

Name	Type	Description
ErrorCodeSamples	ErrorCodeSample	The sample error code returned by the backend service. For more information, see ApiAttributesType.md#ErrorCodeSamples .
RequestConfig	RequestConfig	The returned API frontend definition information. It is an array consisting of RequestConfig data.
ServiceConfig	ServiceConfig	The returned information of the backend service called through the API. It is an array consisting of ServiceConfig data.
SystemParameters	SystemParameter	The returned system parameters input when a backend service is called through the API. It is an array consisting of SystemParameter data.
ConstantParameters	ConstantParameter	The returned constant parameters input when a backend service is called through the API. It is an array consisting of ConstantParameter data.
RequestParameters	RequestParameter	The returned frontend input parameters in the API. It is an array consisting of RequestParameter data.
ServiceParameters	ServiceParameter	The returned constant parameters input when a backend service is called through the API. It is an array consisting of ServiceParameter data.
ServiceParametersMap	ServiceParameterMap	The returned mappings between frontend and backend parameters in the API. It is an array consisting of ServiceParameterMap data.
OpenIdConnectConfig	OpenIdConnectConfig	The configuration items of the third-party OpenID Connect account authentication method. For more information, see ApiAttributesType.md#OpenIdConnectConfig .

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DescribeDeployedApi
&GroupId=0009db9c828549768a200320714b8930
&ApiId=3b81fd160f5645e097cc8855d75a1cf6
&StageName=RELEASE
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeDeployedApiResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ004</RequestId>
  <RegionId>cn-qingdao</RegionId>
  <GroupId>0009db9c828549768a200320714b8930</GroupId>
  <GroupName>myGroup2</GroupName>
```

```

<StageName>RELEASE</StageName>
<ApId>3b81fd160f5645e097cc8855d75a1cf6</ApId>
<ApiName>creatobject</ApiName>
<Description>Create an object</Description>
<Visibility>public</Visibility>
<AuthType>APP</AuthType>
<ResultType>application/json</ResultType>
<ResultSample></ResultSample>
<FailResultSample></FailResultSample>
<DeployedTime>2016-07-23T08:28:48Z</DeployedTime>
<RequestConfig>
  <RequestProtocol>HTTP</RequestProtocol>
  <RequestHttpMethod>GET</RequestHttpMethod>
  <RequestPath>/mypath/creatobject</RequestPath>
  <BodyFormat>FORM</BodyFormat>
  <PostBodyDescription>Object</PostBodyDescription>
</RequestConfig>
<ServiceConfig>
  <ServiceProtocol>HTTP/HTTPS</ServiceProtocol>
  <ServiceAddress>http://api.a.com:8080</ServiceAddress>
  <ServiceHttpMethod>GET</ServiceHttpMethod>
  <ServicePath>/object/add</ServicePath>
  <ServiceTimeout>2000</ServiceTimeout>
  <Mock>FALSE</Mock>
</ServiceConfig>
<SystemParameters>
  <SystemParameter>
    <ParameterName>CaRequestId</ParameterName>
    <ServiceParameterName>RequestId</ServiceParameterName>
    <Location>HEAD</Location>
    <DemoValue>0A964636-F7A3-4F1A-92D7-135584A6397F</DemoValue>
    <Description>Request ID</Description>
  </SystemParameter>
  <SystemParameter>
    <ParameterName>CaApId</ParameterName>
    <ServiceParameterName>ApId</ServiceParameterName>
    <Location>regionid</Location>
    <DemoValue>0A964636-F7A3-4F1A-92D7-135584A6398F</DemoValue>
    <Description>Requester application ID</Description>
  </SystemParameter>
</SystemParameters>
<ConstantParameters>
  <ConstantParameter>
    <ServiceParameterName>ConstantKey1</ServiceParameterName>
    <ConstantValue>helloworld</ConstantValue>
    <Location>regionid</Location>
    <Description>Test</Description>
  </ConstantParameter>
</ConstantParameters>
<RequestParameters>
  <RequestParameter>
    <ApiParameterName>RequestKey1</ApiParameterName>
    <Location>regionid</Location>
    <ParameterType>String</ParameterType>

```

```
<Required>REQUIRED</Required>
<DefaultValue></DefaultValue>
<DemoValue>demo1</DemoValue>
<MaxValue></MaxValue>
<MinValue></MinValue>
<MaxLength>100</MaxLength>
<MinLength>3</MinLength>
<RegularExpression></RegularExpression>
<JsonScheme></JsonScheme>
<EnumValue></EnumValue>
<DocShow>PUBLIC</DocShow>
<DocOrder>1</DocOrder>
<Description>Desc1</Description>
</RequestParameter>
<RequestParameter>
  <ApiParameterName>RequestKey2</ApiParameterName>
  <Location>QUERY</Location>
  <ParameterType>Number</ParameterType>
  <Required>OPTIONAL</Required>
  <DefaultValue></DefaultValue>
  <DemoValue>12</DemoValue>
  <MaxValue>120</MaxValue>
  <MinValue>100</MinValue>
  <MaxLength></MaxLength>
  <MinLength></MinLength>
  <RegularExpression></RegularExpression>
  <JsonScheme></JsonScheme>
  <EnumValue></EnumValue>
  <DocShow>PUBLIC</DocShow>
  <DocOrder>2</DocOrder>
  <Description>Desc2</Description>
</RequestParameter>
</RequestParameters>
<ServiceParameters>
  <ServiceParameter>
    <ServiceParameterName>ServiceKey1</ServiceParameterName>
    <Location>QUERY</Location>
    <ParameterType>String</ParameterType>
  </ServiceParameter>
  <ServiceParameter>
    <ServiceParameterName>ServiceKey2</ServiceParameterName>
    <Location>QUERY</Location>
    <ParameterType>Number</ParameterType>
  </ServiceParameter>
</ServiceParameters>
<ServiceParametersMap>
  <ServiceParameterMap>
    <ServiceParameterName>RequestKey1</ServiceParameterName>
    <RequestParameterName>ServiceKey1</RequestParameterName>
  </ServiceParameterMap>
  <ServiceParameterMap>
    <ServiceParameterName>RequestKey2</ServiceParameterName>
    <RequestParameterName>ServiceKey2</RequestParameterName>
  </ServiceParameterMap>
</ServiceParametersMap>
```

```

</ServiceParametersMap>
<ErrorCodeSamples>
  <ErrorCodeSample>
    <Code>400</Code>
    <Message>Missing the parameter UserId</Message>
    <Description>The UserId parameter is missing from the request</Description>
  </ErrorCodeSample>
</ErrorCodeSamples>
<OpenIdConnectConfig>
  <publicKey>EB1837F8693CCED0BF750B3AD48467BEB569E780A14591CF92</publicKey>
  <openIdApiType>IDTOKEN</openIdApiType>
  <publicKeyId>88483727556929326703309904351185815489</publicKeyId>
</OpenIdConnectConfig>
</DescribeDeployedApiResponse>

```

- JSON format

```

{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ004",
  "RegionId": "cn-qingdao",
  "GroupId": "0009db9c828549768a200320714b8930",
  "GroupName": "myGroup2",
  "StageName": "RELEASE",
  "ApiId": "3b81fd160f5645e097cc8855d75a1cf6",
  "ApiName": "creatobject",
  "Description": "Create an object",
  "Visibility": "public",
  "AuthType": "APP",
  "ResultType": "application/json",
  "DeployedTime": "2016-07-23T08:28:48Z",
  "RequestConfig": {
    "RequestProtocol": "HTTP",
    "RequestHttpMethod": "GET",
    "RequestPath": "/mypath/creatobject",
    "BodyFormat": "FORM",
    "PostBodyDescription": "Object"
  },
  "ServiceConfig": {
    "ServiceProtocol": "HTTP/HTTPS",
    "ServiceAddress": "http://api.a.com:8080",
    "ServiceHttpMethod": "GET",
    "ServicePath": "/object/add",
    "ServiceTimeout": "2000",
    "Mock": "FALSE"
  },
  "SystemParameters": {
    "SystemParameter": [
      {
        "ParameterName": "CaRequestId",
        "ServiceParameterName": "C",
        "Location": "HEAD",
        "DemoValue": "0A964636-F7A3-4F1A-92D7-135584A6397F",
        "Description": "Request ID"
      }
    ]
  }
}

```

```
{
  "ParameterName": "CaAppId",
  "ServiceParameterName": "AppId",
  "Location": "QUERY",
  "DemoValue": "0A964636-F7A3-4F1A-92D7-135584A6398F",
  "Description": "Requester application ID"
}
],
"ConstantParameters": {
  "ConstantParameter": {
    "ServiceParameterName": "ConstantKey1",
    "ConstantValue": "helloworld",
    "Location": "QUERY",
    "Description": "Desc"
  }
},
"RequestParameters": {
  "RequestParameter": [
    {
      "ApiParameterName": "RequestKey1",
      "Location": "QUERY",
      "ParameterType": "String",
      "Required": "REQUIRED",
      "DemoValue": "demo1",
      "MaxLength": "100",
      "MinLength": "3",
      "DocShow": "PUBLIC",
      "DocOrder": "1",
      "Description": "Desc1"
    },
    {
      "ApiParameterName": "RequestKey2",
      "Location": "QUERY",
      "ParameterType": "Number",
      "Required": "OPTIONAL",
      "DemoValue": "12",
      "MaxValue": "120",
      "MinValue": "100",
      "DocShow": "PUBLIC",
      "DocOrder": "2",
      "Description": "Desc2"
    }
  ]
},
"ServiceParameters": {
  "ServiceParameter": [
    {
      "ServiceParameterName": "ServiceKey1",
      "Location": "QUERY",
      "ParameterType": "String"
    },
    {
      "ServiceParameterName": "ServiceKey2",
      "Location": "QUERY",

```



```

    "ParameterType": "Number"
  }
],
},
"ServiceParametersMap": {
  "ServiceParameterMap": [
    {
      "ServiceParameterName": "RequestKey1",
      "RequestParameterName": "ServiceKey1"
    },
    {
      "ServiceParameterName": "RequestKey2",
      "RequestParameterName": "ServiceKey2"
    }
  ]
},
"ErrorCodeSamples": {
  "ErrorCodeSample": [
    {
      "Code": "400",
      "Message": "Missing the parameter UserId",
      "Description": "The UserId parameter is missing from the request"
    }
  ]
},
"OpenIdConnectConfig": {
  "publicKey": "EB1837F8693CCED0BF750B3AD48467BEB569E780A14591CF92",
  "openIdApiType": "IDTOKEN",
  "publicKeyId": "88483727556929326703309904351185815489"
}
}

```

1.11.13. DescribeDeployedApis

Description

You can call this operation to query the list of APIs that have been published to and are running in a specified runtime environment.

- This operation is intended for API providers.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeDeployedApis.
GroupId	String	No	The ID of the API group.

Name	Type	Required	Description
StageName	String	Yes	The name of the runtime environment. Valid values: - RELEASE. - TEST.
ApiId	String	No	The ID of the API.
ApiName	String	No	The name of the API.
PageSize	Integer	No	The number of rows per page. The maximum value is 100. The default value is 10.
PageNumber	Integer	No	The specific page number that you want to query. The default value is 1. The starting number is 1.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
TotalCount	Integer	The total number of returned results.
PageNumber	Integer	The specified page number.
PageSize	Integer	The specified number of rows returned per page.
DeployedApis	DeployedApiItem	The returned API information. It is an array consisting of DeployedApiItem data.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DescribeDeployedApis
&ApiName=weather
&pageSize=15
&pageNumber=3
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeDeployedApisResponse>
  <DeployedApis>
    <DeployedApiItem>
      <RegionId>cn-qingdao</RegionId>
      <GroupId>63be9002440b4778a61122f14c2b2bbb</GroupId>
      <GroupName>myGroup3</GroupName>
      <ApId>c076144d7878437b8f82fb85890ce6a0</ApId>
      <ApiName>Query the list of objects</ApiName>
      <StageName>release</StageName>
      <Visibility>public</Visibility>
      <Description>Query the list of objects by pages</Description>
      <DeployedTime>2016-07-23T08:28:48Z</DeployedTime>
    </DeployedApiItem>
    <DeployedApiItem>
      <RegionId>cn-qingdao</RegionId>
      <GroupId>1084f9034c744137901057206b39d2b6</GroupId>
      <GroupName>myGroup2</GroupName>
      <ApId>5af418828f0344a3b588c0cc1331a3bc</ApId>
      <ApiName>Create an object</ApiName>
      <StageName>release</StageName>
      <Visibility>public</Visibility>
      <Description>Create an object</Description>
      <DeployedTime>2016-07-20T08:28:48Z</DeployedTime>
    </DeployedApiItem>
  </DeployedApis>
  <PageNumber>3</PageNumber>
  <PageSize>15</PageSize>
  <TotalCount>32</TotalCount>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ002</RequestId>
</DescribeDeployedApisResponse>
```

- JSON format

```
{
  "DeployedApis": {
    "DeployedApiItem": [
      {
        "RegionId": "cn-qingdao",
        "GroupId": "63be9002440b4778a61122f14c2b2bbb",
        "GroupName": "myGroup3",
        "ApiId": "c076144d7878437b8f82fb85890ce6a0",
        "ApiName": "Query the list of objects",
        "StageName": "release",
        "Visibility": "public",
        "Description": "Query the list of objects by pages",
        "DeployedTime": "2016-07-23T08:28:48Z"
      },
      {
        "RegionId": "cn-qingdao",
        "GroupId": "1084f9034c744137901057206b39d2b6",
        "GroupName": "myGroup2",
        "ApiId": "5af418828f0344a3b588c0cc1331a3bc",
        "ApiName": "Create an object",
        "StageName": "release",
        "Visibility": "public",
        "Description": "Create an object",
        "DeployedTime": "2016-07-20T08:28:48Z"
      }
    ]
  },
  "PageNumber": 3,
  "PageSize": 15,
  "TotalCount": 32,
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ002"
}
```

1.12. Plugin operations

1.12.1. CreatePlugin

You can call this operation to create a plugin. Features such as throttling and IP address-based access control are integrated into API Gateway as plugins. More plugins such as cross-origin resource sharing (CORS) and caching plugins will be added to the plugin system in the future. You can call this operation to create various types of plugins.

Rules of Use

- For each type of plugin, only one plugin of such type can be bound to an API.
- A plugin can only be bound to an API in the same region.
- Plugin policies and APIs are separately managed. The plugin policies take effect only after you call the AttachPlugin operation to bind a plugin to a specified API in a specified environment.
- Before you bind a plugin to an API, you must publish the API.
- A plugin can be bound, unbound, and updated with immediate effect. You do not need to re-publish an API. We recommend that you first test these APIs that may pose high security risks.

- If an API is unpublished, the relationship between the API and the plugin bound to the API will not change. When the API is re-published, the plugin remains bound to the API.
- If a plugin is bound to an API, the plugin cannot be deleted.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to CreatePlugin.
PluginName	String	Yes	The name of the plugin to be created. The name must be 4 to 50 characters in length and can contain only uppercase and lowercase letters, digits, and underscores (_). The name cannot start with an underscore (_).
PluginType	String	Yes	The type of the plugin to be created. Valid values: • ipControl: IP address-based access control • trafficControl: throttling • backendSignature: backend signature • jwtAuth : JWT authentication (OpenID Connect) • cors: cross-origin resource sharing • caching: caching • routing: backend routing • errorMapping: error code mapping • accessControl: access control
PluginData	String	Yes	The definition statement of the plugin. JSON and YAML formats are supported. For more information, see the PluginData template.
Description	String	No	The description of the plugin. The description can contain a maximum of 200 characters in length.

PluginData template

You can choose the JSON or YAML format to configure your plugins. The two formats have the same schema. You can use the `yaml to json` tool to convert the configuration format of a plugin. The following example shows a template in YAML format:

- Throttling plugins

```
---
unit: SECOND      # The unit of time. Valid values: SECOND, MINUTE, HOUR, and DAY.
apiDefault: 1000  # The default API-level throttling threshold.
userDefault: 30   # Optional. The default user-level throttling threshold. If you set this threshold to 0, user-level throttling is not performed. The user-level throttling threshold cannot be greater than the API-level throttling threshold.
appDefault: 30    # Optional. The default app-level throttling threshold. If you set this threshold to 0, app-level throttling is not performed. The app-level throttling threshold cannot be greater than the user-level throttling threshold.
specials:         # Optional. The special throttling settings. You can set throttling thresholds for special apps or users in a throttling policy.
  - type: "APP"    # The special throttling type. The value APP indicates that throttling is performed for special apps based on their AppKeys.
    policies:
      - key: 10123123 # The app ID. You can obtain the ID of an app from the app details page. To go to this page, click Consume APIs and then APPs in the left-side navigation pane of the API Gateway console and click the name of the app.
        value: 10     # The special throttling threshold for the app. This threshold cannot be greater than the user-level throttling threshold in the throttling policy.
      - key: 10123123 # The app ID.
        value: 10     # The special throttling threshold for the app. This threshold cannot be greater than the user-level throttling threshold in the throttling policy.
```

- IP address-based access control plugins

```
---
type: ALLOW      # The type of access control. You can set this parameter to ALLOW to apply a whitelist or to REFUSE to apply a blacklist.
items:
  - blocks:      # The IP address segment.
    - 78.11.12.2 # Specifies an IP address.
    - 61.3.9.0/24 # Specifies a CIDR block.
  appId: 219810  # Optional. If you specify this parameter, this IP address-based access control policy applies only to the app specified by this parameter.
  - blocks:      # The IP address segment.
    - 79.11.12.2 # Specifies an IP address.
```

- Backend signature plugins

```
---
type: APIGW_BACKEND
key: SampleKey
secret: SampleSecret
```

- JWT authentication

```

---
parameter: X-Token      # The parameter from which the JWT is read. It corresponds to a parameter in an
API request.
parameterLocation: header # The location from which the JWT is read. Valid values: query and header. Th
is parameter is optional if Request Mode for the bound API is set to Request Parameter Mapping(Filter Un
known Parameters) or Request Parameter Mapping(Passthrough Unknown Parameters). It is required if R
equest Mode for the bound API is set to Request Parameter Passthrough.
claimParameters:       # The claims to be converted into parameters. API Gateway maps JWT claims to bac
kend parameters.
- claimName: aud        # The name of the JWT claim, which can be public or private.
parameterName: X-Aud    # The name of the backend parameter, to which the JWT claim is mapped.
location: header        # The location of the backend parameter, to which the JWT claim is mapped. Valid va
lues: query, header, path, and formData.
- claimName: userId     # The name of the JWT claim, which can be public or private.
parameterName: userId   # The name of the backend parameter, to which the JWT claim is mapped.
location: query         # The location of the backend parameter, to which the JWT claim is mapped. Valid val
ues: query, header, path, and formData.
preventJtiReplay: false # Controls whether to enable the anti-replay check for jti. Default value: false.
#
# Public key in the JWK
jwk:
  kty: RSA
  e: AQAB
  use: sig
  kid: O8fpdhrViq2zaaaBEWZITz # If only one JWK is configured, kid is optional. If the JWT includes kid, A
PI Gateway checks the consistency of kid.
  alg: RS256
  n: qSVxcknOm0uCq5vGsOmaorPDzHUubBmZZ4UXj-9do7w9X1uKFXAnqfto4TepSnuYU2bA_-tzSLAGBsR-B
qvT6w9SjxakeiyQpVmexnDw5WZwpWenUAcYrfSPEoNU-0hAQwFYgqZwJQMN8ptxkd0170PFauwACox4H
fr-9FPGy8NCoIO4MfLxzJ3mJ7xqglZp3NIOGXz-GIAbCf13ii7kSStpYqN3L_zzpvXUAos1FJ9IPXRV84tiZpFVh2l
mRh0h8lmK-vl42dwld_hOlzayL1Xno2R0T-d5AwTSdnept7g-Fwu8-sj4cCRWq3bd61Zs2QOJ8iustH0vSRMYd
P5oYQ

```

- CORS plugins

```

---
allowOrigins: "api.foo.com"      # The allowed origins. Separate origins with commas (,). Default
value: *.
allowMethods: "GET,POST,PUT,DELETE,HEAD,OPTIONS,PATCH" # The allowed HTTP methods.
allowHeaders: "Authorization,Accept,Accept-Ranges,Cache-Control,Range,Date,Content-Type,Content-L
ength,Content-MD5,User-Agent,X-Ca-Signature,X-Ca-Signature-Headers,X-Ca-Signature-Method,X-Ca-Key
,X-Ca-Timestamp,X-Ca-Nonce,X-Ca-Stage,X-Ca-Request-Mode,x-ca-deviceid"
exposeHeaders: "Content-MD5,Server,Date,Latency,X-Ca-Request-Id,X-Ca-Error-Code,X-Ca-Error-Message
"
maxAge: 172800
allowCredentials: true           # Controls whether cookies are allowed.

```

- Caching plugins

```
---
varyByApp: false # Controls whether to match and serve cached responses based on the app IDs of API callers. Default value: false.
varyByParameters: # Controls whether to match and serve cached responses based on the values of specific parameters.
- userId # The name of a backend parameter. If the backend parameter is mapped to a parameter with a different name, set this parameter to the mapped parameter name.
varyByHeaders: # Controls whether to match and serve cached responses based on different request headers.
- Accept # Cached responses are matched and served based on the Accept header.
clientCacheControl: # API Gateway determines how to process the Cache-Control headers of client requests based on the clientCacheControl settings.
  mode: "app" # Valid values: off, all, and apps. Default value: off. off indicates that API Gateway ignores the Cache-Control headers of all client requests. all indicates that API Gateway processes the Cache-Control headers of all client requests. apps indicates that API Gateway processes only the Cache-Control headers of client requests whose app IDs are included in the configured apps list.
  apps: # A list of app IDs. If mode is set to app, API Gateway processes only the Cache-Control headers of client requests whose app IDs are in this list.
  - 1992323 # A sample app ID. It is not an AppKey.
  - 1239922 # A sample app ID. It is not an AppKey.
cacheableHeaders: # The cacheable response headers. By default, API Gateway caches only the Content-Type and Content-Length headers of backend responses.
- X-Customer-Token # The name of the cacheable response header.
```

- Backend routing plugins

```
---
routes:
# Responses that are no longer supported are returned to clients of an earlier version. ClientVersion is a custom parameter in the API.
- name: MockForOldClient
  condition: "$ClientVersion < '2.0.5'"
  backend:
    type: "MOCK"
    statusCode: 400
    mockBody: "This version is not supported!!!"
# Blue-green release scenarios: Five percent of requests are routed to the backend of a blue-green release.
- name: BlueGreenPercent05
  condition: "Random() < 0.05"
  backend:
    type: "HTTP"
    address: "https://beta-version.api.foo.com"
  constant-parameters:
  - name: x-route-blue-green
    location: header
    value: "route-blue-green"
```

- Error code mapping plugins


```
---
# The parameters that are involved in mapping.
parameters:
  statusCode: "StatusCode"
  resultCode: "BodyJsonField:$.result_code"
  resultId: "BodyJsonField:$.req_msg_id"
# The mapping condition.
errorCondition: "$statusCode = 200 and $resultCode <> 'OK'"
# The parameter in an error response that is used to specify the error code and hit mapping rules.
errorCode: "resultCode"
# Mapping rules.
mappings:
  - code: "ROLE_NOT_EXISTS"
    statusCode: 404
    errorMessage: "Role Not Exists, RequestId=${resultId}"
  - code: "INVALID_PARAMETER"
    statusCode: 400
    errorMessage: "Invalid Parameter, RequestId=${resultId}"
# The default mapping rule.
defaultMapping:
  statusCode: 500
  errorMessage: "Unknown Error, ${resultCode}, RequestId=${ResultId}"
```

- Access control plugins

```
---
#
# Assume that the API request path is /{userId}/... in this example.
# JWT authentication is enabled for APIs. Two claims, userId and userType, are available in the JWT.
# The following plugin verification conditions apply:
# - If userType is set to admin, requests in all paths are allowed.
# - If userType is set to user, only the requests in the same /{userId} path are allowed.
parameters:
  userId: "Token:userId"
  userType: "Token:userType"
  pathUserId: "path:userId"
#
# Rules are defined based on the preceding parameters. For each API request, the plugin checks the rules in
# sequence. If a condition in a rule is met, the result is true and the action that is specified by ifTrue is performed.
# If a condition in a rule is not met, the result is false and the action that is specified by ifFalse is performed.
# The action ALLOW indicates that the request is allowed. The action DENY indicates that the request is denied and an
# error code is returned to the client. After the ALLOW or DENY action is performed, the plugin does not check the
# remaining conditions.
# If neither the ALLOW nor DENY action is performed, the plugin proceeds to check the next condition.
rules:
  - name: admin
    condition: "$userType = 'admin'"
    ifTrue: "ALLOW"
  - name: user
    condition: "$userId = $pathUserId"
    ifFalse: "DENY"
    statusCode: 403
    errorMessage: "Path not match ${userId} vs /${pathUserId}"
    responseHeaders:
      Content-Type: application/xml
    responseBody: |
      <Reason>Path not match ${userId} vs /${pathUserId}</Reason>
```

- Circuit breaker plugins

```
---
timeoutThreshold: 15      # The threshold for the number of times when timeout occurs at the backend.
windowInSeconds: 30      # The time window to check the number of times when timeout occurs at the backend.
openTimeoutSeconds: 15    # The period of time during which the circuit breaker stays open after it trips.
downgradeBackend:         # The backend to which API requests are directed when the circuit breaker is open.
type: mock
statusCode: 302
body: |
  <result>
    <errorCode>I's a teapot</errorCode>
  </result>
```

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.
PluginId	String	The unique ID of the plugin.

Examples

Sample requests

```
http://apigateway.cn-qingdao.aliyuncs.com/?Action=CreatePlugin
&PluginName=NewCors
&PluginType=cors
&PluginData="Plugin definition"
&Description="createPlugin"
&<Common request parameters>
```

Sample responses

- XML format

```
<CreatePluginResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
  <PluginId>285bb759342649a1b70c2093a772e087</PluginId>
</CreatePluginResponse>
```

- JSON format

```
{
  "RequestId":"EF924FE4-2EDD-4CD3-89EC-34E4708574E7",
  "PluginId":"1f3bde29b43d4d53989248327ff737f2"
}
```

1.12.2. ModifyPlugin

Description

You can call this operation to modify the configurations of a custom plug-in.

- This operation is intended for API providers.
- The modified configuration takes effect immediately.
- The name of the plug-in must be unique.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set this parameter to ModifyPlugin.
PluginId	String	Yes	The ID of the plug-in to be modified.

Parameter	Type	Required	Description
PluginName	String	No	The name of the plug-in to be modified. The name must be 4 to 50 characters in length and can contain uppercase and lowercase letters, digits, and underscores (_). It cannot start with an underscore.
PluginData	String	No	The definition statement of the plug-in. For more information about the format, see the "PluginData template" section of the CreatePlugin topic.
Description	String	No	Description

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.

Examples

Sample requests

```
http://apigateway.cn-qingdao.aliyuncs.com/?Action=ModifyPlugin
&PluginId=a96926e82f994915a8da40a119374537
&PluginName=modifyCors
&PluginData="Plugin definition"
&Description="modify plugin first"
&<Common request parameters>
```

Sample responses

- XML format

```
<ModifyPluginResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ004</RequestId>
</ModifyPluginResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ004",
}
```

1.12.3. DeletePlugin

Description

You can call this operation to delete a specified custom plug-in.

- This operation is intended for API providers.

- If the plug-in is bound to an API, you must unbind the plug-in from the API before deleting the plug-in. Otherwise, an error is reported.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set this parameter to DeletePlugin.
PluginId	String	Yes	The ID of the plug-in to be deleted.

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.

Examples

Sample requests

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DeletePlugin
&PluginId=9a3f1a5279434f2ba74ccd91c295af9f
&<Common request parameters>
```

Sample responses

- XML format

```
<DeletePluginResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ004</RequestId>
</DeletePluginResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ004",
}
```

1.12.4. AttachPlugin

Description

You can call this operation to bind a plug-in to an API.

- This operation is intended for API providers.
- You can only bind plug-ins to published APIs.
- The plug-in takes effect immediately after it is bound to an API.

- If you bind a different plug-in to an API, this plug-in takes effect immediately.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set this parameter to AttachPlugin.
PluginId	String	Yes	The ID of the plug-in to be bound to the API.
ApiId	String	Yes	The ID of the API to which the plug-in is bound.
StageName	String	Yes	The name of the runtime environment to which the API is deployed. Valid values: • RELEASE: the release environment • PRE: the pre-release environment • TEST: the test environment

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.

Examples

Sample requests

```
http://apigateway.cn-qingdao.aliyuncs.com/Action=AttachPlugin
&PluginId=9a3f1a5279434f2ba74ccd91c295af9f
&ApiId=8afff6c8c4c6447abb035812e4d66b65
&StageName=RELEASE
```

Sample responses

- XML format

```
<AttachPluginResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</AttachPluginResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ004"
}
```

1.12.5. DetachPlugin

Description

You can call this operation to unbind a plug-in from an API.

- This operation is intended for API providers.
- This operation is used to unbind a plug-in from an API. A plug-in can be unbound from an API with immediate effect.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set this parameter to DetachPlugin.
PluginId	String	Yes	The ID of the plug-in to be unbound.
ApiId	String	Yes	The ID of the API from which the plug-in is unbound.
StageName	String	Yes	The name of the runtime environment to which the API is deployed. Valid values: • RELEASE: the release environment • PRE: the pre-release environment • TEST: the test environment

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.

Examples

Sample requests

```
http://apigateway.cn-qingdao.aliyuncs.com/?Action=DetachPlugin
&PluginId=9a3f1a5279434f2ba74ccd91c295af9f
&ApiId=8afff6c8c4c6447abb035812e4d66b65
&StageName=RELEASE
&<Common request parameters>
```

Sample responses

- XML format

```
<DetachPluginResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ004</RequestId>
</DetachPluginResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ004"
}
```

1.12.6. DescribePluginApis

Description

You can call this operation to query detailed information of the APIs to which a specified plug-in is bound.

- This operation is intended for API providers.
- This operation is used to query detailed information of the APIs to which a specified plug-in is bound.
- This operation supports pagination.
- The returned APIs to which a plug-in is bound may be unpublished.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set this parameter to DescribePluginApis.
PluginId	String	Yes	The ID of the plug-in for the query.
PageSize	Integer	No	The number of entries to return on each page. Maximum value: 100. Default value: 10.
PageNumber	Integer	No	The number of the page to return. Pages start from page 1. Default value: 1.

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.
TotalCount	Integer	The total number of returned entries.
PageSize	Integer	The number of entries returned on each page.
PageNumber	Integer	The number of the page returned.
ApiSummarys	ApiPluginSummary	The returned API information. It is an array consisting of ApiPluginSummary data.

Examples

Sample requests


```
http://apigateway.cn-qingdao.aliyuncs.com/?Action=DescribePluginApis
&PluginId=a96926e82f994915a8da40a119374537
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribePluginApisResponse>
  <RequestId>46373DC4-19F1-4DC8-8C31-1107289BB5E0</RequestId>
  <TotalCount>20</TotalCount>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <ApiSummaries>
    <ApiPluginSummary>
      <ApiId>9a3f1a5279434f2ba74ccd91c295af9f</ApiId>
      <ApiName>firstAPI</ApiName>
      <RegionId>cn-qingdao</RegionId>
      <StageName>RELEASE</StageName>
      <GroupId>46c79e78dfab4521a5f737faa805c4e1</GroupId>
      <GroupName>firstGroup</GroupName>
      <Description>Description</Description>
    </ApiPluginSummary>
  </ApiSummaries>
</DescribePluginApisResponse>
```

- JSON format

```
{
  "RequestId": "2DF14872-77CE-43A4-AB47-C4F128E5AA31",
  "TotalCount": "1",
  "PageNumber": "1",
  "PageSize": "10",
  "ApiSummaries": {
    "ApiPluginSummary": [{
      "ApiId": "9a3f1a5279434f2ba74ccd91c295af9f",
      "ApiName": "firstAPI",
      "RegionId": "cn-qingdao",
      "StageName": "RELEASE",
      "GroupId": "46c79e78dfab4521a5f737faa805c4e1",
      "GroupName": "firstGroup",
      "Description": "Description",
    }]
  },
}
```

1.12.7. DescribePlugins

Description

You can call this operation to query the details of API Gateway plug-ins that meet specified query conditions.

- This operation supports pagination.
- This operation allows you to query by business type.
- This operation allows you to query by ID.
- This operation allows you to query by name.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set this parameter to DescribePlugins.
PluginId	String	No	The ID of the plug-in to query.
PluginName	String	No	The name of the plug-in to query.
PluginType	String	No	The type of the plug-in to query. Valid values: • ipControl: IP address-based access control • trafficControl: throttling • backendSignature: back-end signature
PageSize	Integer	No	The number of entries to return on each page. Maximum value: 100. Default value: 10.
PageNumber	Integer	No	The number of the page to return. Pages start from page 1. Default value: 1.

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.
TotalCount	Integer	The total number of returned entries.
PageNumber	Integer	The number of the page returned.
PageSize	Integer	The number of entries returned on each page.
Plugins	PluginAttribute	The returned plug-in information. It is an array consisting of PluginAttribute data.

Examples

Sample requests

```
http://apigateway.cn-qingdao.aliyuncs.com/?Action=DescribePlugins
&PluginId=a96926e82f994915a8da40a119374537
&PluginName=testPlugin
&PluginType=ipControl
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribePluginsResponse>
  <RequestId>46373DC4-19F1-4DC8-8C31-1107289BB5E0</RequestId>
  <TotalCount>20</TotalCount>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <Plugins>
    <PluginAttribute>
      <PluginId>9a3f1a5279434f2ba74ccd91c295af9f</PluginId>
      <PluginName>firstPlugin</PluginName>
      <RegionId>cn-qingdao</RegionId>
      <PluginType>trafficControl</PluginType>
      <PluginData>{"unit":"MINUTE","apiDefault":20}</PluginData>
      <Description>Throttling</Description>
      <CreateTime>2019-01-11T09:29:58Z</CreateTime>
      <ModifiedTime>2019-01-11T09:29:58Z</ModifiedTime>
    </PluginAttribute>
  </Plugins>
</DescribePluginsResponse>
```

- JSON format

```
{
  "RequestId": "46373DC4-19F1-4DC8-8C31-1107289BB5E0",
  "TotalCount": "1",
  "PageNumber": "1",
  "PageSize": "10",
  "Plugins": {
    "PluginAttribute": [{
      "PluginId": "9a3f1a5279434f2ba74ccd91c295af9f",
      "PluginName": "firstPlugin",
      "RegionId": "cn-qingdao",
      "PluginType": "trafficControl",
      "PluginData": "{\"unit\":\"MINUTE\",\"apiDefault\":20}",
      "Description": "throttling",
      "CreateTime": "2019-01-11T09:29:58Z",
      "ModifiedTime": "2019-01-11T09:29:58Z"
    }]
  }
}
```

1.12.8. DescribePluginsByApi

Description

You can call this operation to query plug-ins that are bound to a specified API. The API must have been published to an environment.

- This API is intended for API providers.
- This operation is used to query plug-ins that are bound to a specified API in a specific environment.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribePluginsByApi.
GroupId	String	Yes	The ID of the group to which the API to be queried belongs.
ApiId	String	Yes	The ID of the API to be queried.
StageName	String	Yes	The runtime environment of the API. Valid values: • RELEASE • PRE: the pre-release environment • TEST: the test environment

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.
TotalCount	Integer	The total number of returned entries.
PageNumber	Integer	The page number of the returned page.
PageSize	Integer	The number of entries returned per page.
Plugins	PluginAttribute	The returned plug-in information. It is an array consisting of PluginAttribute data.

Examples

Sample requests

```
http://apigateway.example.com/?Action=DescribePluginsByApi
&ApiId=93f4ead4080c4b2da70b7f81f50ae459
&GroupId=3c7a38392e764718ad7673e7b7f535d4
&StageName=RELEASE
&<Common request parameters>
```

Sample success responses

- XML format

```
<DescribePluginsByApiResponse>
  <RequestId>46373DC4-19F1-4DC8-8C31-1107289BB5E0</RequestId>
  <TotalCount>20</TotalCount>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <Plugins>
    <PluginAttribute>
      <PluginId>9a3f1a5279434f2ba74ccd91c295af9f</PluginId>
      <PluginName>firstPlugin</PluginName>
      <RegionId>cn-qingdao</RegionId>
      <PluginType>trafficControl</PluginType>
      <PluginData>{"unit":"MINUTE","apiDefault":20}</PluginData>
      <Description>Throttling</Description>
      <CreateTime>2019-01-11T09:29:58Z</CreateTime>
      <ModifiedTime>2019-01-11T09:29:58Z</ModifiedTime>
    </PluginAttribute>
  </Plugins>
</DescribePluginsByApiResponse>
```

- JSON format

```
{
  "RequestId": "46373DC4-19F1-4DC8-8C31-1107289BB5E0",
  "TotalCount": "1",
  "PageNumber": "1",
  "PageSize": "10",
  "Plugins": {
    "PluginAttribute": [{
      "PluginId": "9a3f1a5279434f2ba74ccd91c295af9f",
      "PluginName": "firstPlugin",
      "RegionId": "cn-qingdao",
      "PluginType": "trafficControl",
      "PluginData": "{\"unit\":\"MINUTE\",\"apiDefault\":20}",
      "Description": "throttling",
      "CreateTime": "2019-01-11T09:29:58Z",
      "ModifiedTime": "2019-01-11T09:29:58Z"
    }]
  }
}
```

1.13. App management operations

1.13.1. CreateApp

Description

You can call this operation to create an application. An application is used to call third-party APIs.

- This operation is intended for API callers.
- Each application has a key pair that is used for identity authentication when an API is called.
- An application must be authorized to call an API.
- Each application has only one key pair. You can reset the key pair as needed.
- The QPS limit on this operation is 50 per user.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set this parameter to CreateApp.
AppName	String	Yes	The name of the application. The name must be globally unique. We recommend that you add a special identifier to ensure that the name is unique. The name must be 4 to 15 characters in length. It must start with a letter and can contain letters, digits, and underscores (_).
Description	String	No	The description of the application. The description can contain a maximum of 180 characters in length.

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.
AppId	Long	The unique ID of the application.

Examples

Sample requests

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=CreateApp
&AppName=CreateAppTest
&Description=test
&<Common request parameters>
```

Sample responses

- XML format

```
<CreateAppResponse>
  <AppId>20112314518278</AppId>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ015</RequestId>
</CreateAppResponse>
```

- JSON format

```
{
  "AppId":20112314518278,
  "RequestId":"BA20890E-75C7-41BC-9C8B-73276B58F550"
}
```

1.13.2. ModifyApp

Description

You can call this operation to modify the basic information of a specific application.

- This operation is intended for API callers.
- AppName or Description can be modified. If these parameters are not specified, no modifications are made and the operation will directly return a successful response.
- The QPS limit on this operation is 50 per user.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to ModifyApp.
AppId	Long	Yes	The application ID.
AppName	String	No	The application name, which is globally unique. We recommend that you add a special identifier to ensure the name is unique. The name must be 4 to 15 characters in length. It must start with a letter and can contain letters, numbers, and underscores (_). This parameter is optional.
Description	String	No	The API description, which cannot exceed 180 characters. This parameter is optional.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=ModifyApp
&AppId=20112314518278
&Description=modidyTest
&<Common request parameters>
```

Sample responses

- XML format

```
<ModifyAppResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ015</RequestId>
</ModifyAppResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ015"
}
```

1.13.3. ResetAppSecret

Description

You can call this operation to reset the secret of a specific application.

- This operation is intended for API callers.
- A new secret is automatically generated after you have called this operation. This secret cannot be customized.
- The results returned by this operation do not contain the application secret. You can obtain the secret by calling DescribeAppSecurity.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to ResetAppSecret.
AppKey	String	Yes	The application key that is used for calling an API.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request


```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=ResetAppSecret
&AppKey=60030986
&<Common request parameters>
```

Sample responses

- XML format

```
<ResetAppSecretResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ015</RequestId>
</ResetAppSecretResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ015"
}
```

1.13.4. DescribeAppAttributes

Description

You can call this operation to query applications and their basic information.

- This operation is intended for API callers.
- The AppId parameter is optional in requests.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeAppAttributes.
AppId	Long	No	The application ID.
PageSize	Integer	No	The number of rows per page. The maximum value is 100. The default value is 10.
PageNumber	Integer	No	The specific page number that you want to query. The default value is 1. The starting number is 1.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
TotalCount	Integer	The total number of rows.
PageNumber	Integer	The specified page number.

Name	Type	Description
PageSize	Integer	The specified number of rows returned per page.
Apps	AppAttribute	The returned application information. It is an array consisting of AppAttribute data.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DescribeAppAttributes
&AppId=20112314518278
&pageSize=10
&pageNumber=1
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeAppAttributesResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ015</RequestId>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <Apps>
    <AppAttribute>
      <AppId>20112314518278</AppId>
      <AppName>CreateApptest</AppName>
      <Description>APP test</Description>
      <CreateTime>2016-07-31T04:10:19Z</CreateTime>
      <ModifyTime>2016-07-31T04:10:19Z</ModifyTime>
    </AppAttribute>
  </Apps>
</DescribeAppAttributesResponse>
```

- JSON format

```
{
  "TotalCount":1,
  "PageSize":10,
  "PageNumber":1,
  "RequestId":"8883AC74-259D-4C0B-99FC-0B7F9A588B2F",
  "Apps":
  {
    "AppAttribute":
    [
      {
        "AppId":20112314518278,
        "AppName":"CreateApptest",
        "Description":"APP test",
        "CreatedTime":"2016-07-31T04:10:19Z",
        "ModifiedTime":"2016-07-31T04:10:19Z"
      }
    ]
  }
}
```

1.13.5. DescribeAppSecurity

Description

You can call this operation to query the key of a specified application. The key is used for authentication when you call an API.

This operation is intended for API callers.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeAppSecurity.
AppId	Long	Yes	The application ID.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
AppKey	String	The application key.
AppSecret	String	The application secret.
CreatedTime	String	The creation time (UTC) of the key, which is the same as the application creation time.
ModifiedTime	String	The modification time (UTC) of the key.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DescribeAppSecurity
&AppId=20112314518278
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeAppSecurityResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ015</RequestId>
  <AppKey>60030986</AppKey>
  <AppSecret>c1ae97aaa7e45f21d10824bc44678fee</AppSecret>
  <CreatedTime>2016-07-31T04:10:19Z</CreatedTime>
  <ModifiedTime>2016-07-31T04:10:19Z</ModifiedTime>
</DescribeAppSecurityResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ015",
  "AppKey": "60030986",
  "AppSecret": "c1ae97aaa7e45f21d10824bc44678fee",
  "CreatedTime": "2016-07-31T04:10:19Z",
  "ModifiedTime": "2016-07-31T04:10:19Z"
}
```

1.13.6. DeleteApp

Description

You can call this operation to delete a specified application.

- This operation is intended for API callers.
- After deletion, the application and its API authorization cannot be restored.
- The QPS limit on this operation is 50 per user.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DeleteApp.
AppId	Long	Yes	The application ID.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DeleteApp
&AppId=20112314518278
&<Common request parameters>
```

Sample responses

- XML format

```
<DeleteAppResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ015</RequestId>
</DeleteAppResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BZ015"
}
```

1.14. Authorization operations

1.14.1. DescribeApps

Description

You can call this operation to query which applications you are able to grant permissions to. You can then grant permissions based on the obtained application information.

- This operation is intended for API providers.
- API providers can use the application IDs or their Apsara Stack tenant accounts to query application information.
- Each provider can call this operation for a maximum of 200 times every day in a region.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeApps.
AppId	Long	No	The application ID.
AppOwner	String	No	The Apsara Stack tenant account ID of the application owner.

Name	Type	Required	Description
PageSize	Integer	No	The number of rows per page. The maximum value is 100. The default value is 10.
PageNumber	Integer	No	The specific page number that you want to query. The default value is 1. The starting number is 1.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
TotalCount	Integer	The total number of rows.
PageNumber	Integer	The specified page number.
PageSize	Integer	The specified number of rows returned per page.
Apps	ApplItem	The returned application information. It is an array consisting of ApplItem data.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DescribeApps
&AppId=20112314518278
&pageSize=10
&pageNumber=1
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeAppsResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BZ015</RequestId>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <Apps>
    <ApplItem>
      <AppId>20112314518278</AppId>
      <AppName>CreateApptest</AppName>
      <Description>APP test</Description>
    </ApplItem>
  </Apps>
</DescribeAppsResponse>
```

- JSON format

```
{
  "TotalCount":1,
  "PageSize":10,
  "PageNumber":1,
  "RequestId":"8883AC74-259D-4C0B-99FC-0B7F9A588B2F",
  "Apps":
  {
    "ApplItem":
    [
      {
        "AppId":20112314518278,
        "AppName":"CreateApptest",
        "Description":"APP test"      }
    ]
  }
}
```

1.14.2. DescribeAuthorizedApis

Description

You can call this operation to query the APIs that a specified application can call.

- This operation is intended for API callers.
- The specified application can call all APIs included in the responses.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeAuthorizedApis.
AppId	Long	Yes	The application ID, which is generated by the system and globally unique.
PageNumber	Integer	No	The specific page number that you want to query. The default value is 1. The starting number is 1.
PageSize	Integer	No	The number of rows per page. The maximum value is 100. The default value is 10.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
TotalCount	Integer	The total number of rows.
PageSize	Integer	The specified number of rows returned per page.

Name	Type	Description
PageNumber	Integer	The specified page number.
AuthorizedApis	AuthorizedApi	The authorized API set.

Examples

Sample request

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=DescribeAuthorizedApis
&AppId=2386789
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeAuthorizedApisResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>2</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>D6E46F10-F26C-4AA0-BB69-FE2743D9AE62</RequestId>
  <AuthorizedApis>
    <AuthorizedApi>
      <RegionId>cn-hangzhou</RegionId>
      <GroupId>523e8dc7bbe04613b5b1d726c2a7889d</GroupId>
      <GroupName>Weather</GroupName>
      <StageName>RELEASE</StageName>
      <Operator>PROVIDER</Operator>
      <ApiId>baacc592e63a4cb6a41920d9d3f91f38</ApiId>
      <ApiName>AreaWeather</ApiName>
      <AuthorizationSource>CONSOLE</AuthorizationSource>
      <Description>Queries weather based on the region name</Description>
      <AuthorizedTime>2016-07-21T06:17:20Z</AuthorizedTime>
    </AuthorizedApi>
    <AuthorizedApi>
      <RegionId>cn-hangzhou</RegionId>
      <GroupId>523e8dc7bbe04613b5b1d726c2a7889d</GroupId>
      <GroupName>Weather</GroupName>
      <StageName>RELEASE</StageName>
      <Operator>CONSUMER</Operator>
      <ApiId>baacc592e63a4cb6a41920d9d3f89g76</ApiId>
      <ApiName>Area</ApiName>
      <AuthorizationSource>API</AuthorizationSource>
      <Description>Queries regions</Description>
      <AuthorizedTime>2016-07-21T06:17:20Z</AuthorizedTime>
    </AuthorizedApi>
  </AuthorizedApis>
</DescribeAuthorizedApisResponse>
```

- JSON format


```
{
  "PageNumber": "1",
  "TotalCount": "2",
  "PageSize": "10",
  "RequestId": "D6E46F10-F26C-4AA0-BB69-FE2743D9AE62",
  "AuthorizedApis": {
    "AuthorizedApi": [
      {
        "RegionId": "cn-hangzhou",
        "GroupId": "523e8dc7bbe04613b5b1d726c2a7889d",
        "GroupName": "Weather",
        "StageName": "RELEASE",
        "Operator": "Provider",
        "ApiId": "baacc592e63a4cb6a41920d9d3f91f38",
        "ApiName": "AreaWeather",
        "AuthorizationSource": "CONSOLE",
        "Description": "Queries weather based on the region name",
        "AuthorizedTime": "2016-07-21T06:17:20Z"
      },
      {
        "RegionId": "cn-hangzhou",
        "GroupId": "523e8dc7bbe04613b5b1d726c2a7889d",
        "GroupName": "Weather",
        "StageName": "RELEASE",
        "Operator": "CONSUMER",
        "ApiId": "baacc592e63a4cb6a41920d9d3f89g76",
        "ApiName": "Area",
        "AuthorizationSource": "API",
        "Description": "Queries regions",
        "AuthorizedTime": "2016-07-21T06:17:20Z"
      }
    ]
  }
}
```

1.14.3. DescribeAuthorizedApps

Description

You can call this operation to query which applications currently have access to a specified API.

- This operation is intended for API providers.
- All applications included in the responses have access to the specified API.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeAuthorizedApps.

Name	Type	Required	Description
GroupId	String	Yes	The API group ID, which is generated by the system and globally unique.
ApiId	String	Yes	The API ID, which is generated by the system and globally unique.
StageName	String	No	The name of the runtime environment. Valid values: • RELEASE • TEST
PageNumber	Integer	No	The specific page number that you want to query. The default value is 1. The starting number is 1.
PageSize	Integer	No	The number of rows per page. The maximum value is 100. The default value is 10.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
TotalCount	Integer	The total number of rows.
PageNumber	Integer	The specified page number.
PageSize	Integer	The specified number of rows returned per page.
AuthorizedApps	AuthorizedApp	The returned group set.

Examples

Sample request

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=DescribeAuthorizedApps
&GroupId=523e8dc7bbe04613b5b1d726c2a7889d
&ApiId=baacc592e63a4cb6a41920d9d3f91f38
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeAuthorizedAppsResponse>
  <TotalCount>2</TotalCount>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <RequestId>D6E46F10-F26C-4AA0-BB69-FE2743D9AE62</RequestId>
  <AuthorizedApps>
    <AuthorizedApp>
      <StageName>RELEASE</StageName>
      <AppId>2386789</AppId>
      <AppName>Weather app</AppName>
      <Operator>PROVIDER</Operator>
      <AuthorizationSource>CONSOLE</AuthorizationSource>
      <Description>Queries weather based on the region name</Description>
      <AuthorizedTime>2016-07-21T06:17:20Z</AuthorizedTime>
    </AuthorizedApp>
    <AuthorizedApp>
      <StageName>TEST</StageName>
      <AppId>2386789</AppId>
      <AppName>Weather app</AppName>
      <Operator>CONSUMER</Operator>
      <AuthorizationSource>API</AuthorizationSource>
      <Description>Queries weather based on the region name</Description>
      <AuthorizedTime>2016-07-21T06:17:20Z</AuthorizedTime>
    </AuthorizedApp>
  </AuthorizedApps>
</DescribeAuthorizedAppsResponse>
```

- JSON format

```
{
  "TotalCount": "2",
  "PageNumber": "1",
  "PageSize": "10",
  "RequestId": "D6E46F10-F26C-4AA0-BB69-FE2743D9AE62",
  "AuthorizedApps": {
    "AuthorizedApp": [
      {
        "StageName": "RELEASE",
        "AppId": 2386789,
        "AppName": "Weather app",
        "Operator": "PROVIDER",
        "AuthorizationSource": "CONSOLE",
        "Description": "Queries weather based on the region name",
        "AuthorizedTime": "2016-07-21T06:17:20Z"
      },
      {
        "StageName": "TEST",
        "AppId": 2386789,
        "AppName": "Weather app",
        "Operator": "CONSUMER",
        "AuthorizationSource": "API",
        "Description": "Queries weather based on the region name",
        "AuthorizedTime": "2016-07-21T06:17:20Z"
      }
    ]
  }
}
```

1.14.4. SetApisAuthorities

Description

You can call this operation to grant access permissions on multiple APIs to a specified application. In this case, multiple APIs map to a single application.

- This operation is intended for API providers and callers.
- API providers can authorize any applications to call their APIs.
- API callers can authorize their own applications to call APIs they have purchased.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to SetApisAuthorities.
GroupId	String	Yes	The API group ID, which is generated by the system and globally unique.

Name	Type	Required	Description
StageName	String	Yes	The name of the runtime environment. Valid values: - RELEASE - TEST
Appld	Long	Yes	The application ID, which is generated by the system and globally unique.
Apilds	String	No	The API ID for the specified operation. Separate multiple API IDs with commas (,). A maximum of 100 API IDs can be entered.
Description	String	No	The authorization description.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=SetApisAuthorities
&GroupId=523e8dc7bbe04613b5b1d726c2a7889d
&StageName=RELEASE
&Appld=2386789
&Apilds=baacc592e63a4cb6a41920d9d3f91f38,jkscc489e63a4cb6a41920d9d3f92d78
&<Common request parameters>
```

Sample responses

- XML format

```
<SetApisAuthoritiesResponse>
  <RequestId>D6E46F10-F26C-4AA0-BB69-FE2743D9AE62</RequestId>
</SetApisAuthoritiesResponse>
```

- JSON format

```
{
  "RequestId": "D6E46F10-F26C-4AA0-BB69-FE2743D9AE62",
}
```

1.14.5. SetAppsAuthorities

Description

You can call this operation to grant access permissions on a specified API to multiple applications. In this case, multiple applications map to a single API.

- This operation is intended for API providers and callers.
- API providers can authorize any applications to call their APIs.
- API callers can authorize their own applications to call APIs they have purchased.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to SetAppsAuthorities.
GroupId	String	Yes	The API group ID, which is generated by the system and globally unique.
StageName	String	Yes	The name of the runtime environment. Valid values: • RELEASE • TEST
ApiId	String	Yes	The API ID, which is generated by the system and globally unique.
AppIds	String	Yes	The application ID for the specified operation. Separate multiple application IDs with commas (.). A maximum of 100 application IDs can be entered.
Description	String	No	The authorization description.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=SetAppsAuthorities
&GroupId=523e8dc7bbe04613b5b1d726c2a7889d
&StageName=RELEASE
&ApiId=baacc592e63a4cb6a41920d9d3f91f38
&AppIds=2386789,3389798
&<Common request parameters>
```

Sample responses

- XML format

```
<SetAppsAuthoritiesResponse>
  <RequestId>D6E46F10-F26C-4AA0-BB69-FE2743D9AE62</RequestId>
</SetAppsAuthoritiesResponse>
```

- JSON format

```
{
  "RequestId": "D6E46F10-F26C-4AA0-BB69-FE2743D9AE62",
}
```

1.14.6. RemoveApisAuthorities

Description

You can call this operation to revoke the access permissions on multiple APIs from a specified application. In this case, multiple APIs map to a single application.

- This operation is intended for API providers and callers.
- Before you revoke access permissions, check by whom the permissions were granted. API providers can only revoke permissions granted by a Provider, and API callers can only revoke permissions granted by a Consumer.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to RemoveApisAuthorities.
GroupId	String	Yes	The API group ID, which is generated by the system and globally unique.
StageName	String	Yes	The name of the runtime environment. Valid values: • RELEASE • TEST
ApiIds	String	Yes	The API ID for the specified operation. Separate multiple API IDs with commas (.). A maximum of 100 API IDs can be entered.
AppId	Long	Yes	The application ID, which is generated by the system and globally unique.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=RemoveApisAuthorities
&GroupId=523e8dc7bbe04613b5b1d726c2a7889d
&StageName=RELEASE
&ApiId=baacc592e63a4cb6a41920d9d3f91f38,jksc489e63a4cb6a41920d9d3f92d78
&AppId=2386789
&<Common request parameters>
```

Sample responses

- XML format

```
<RemoveApisAuthoritiesResponse>
  <RequestId>D6E46F10-F26C-4AA0-BB69-FE2743D9AE62</RequestId>
</RemoveApisAuthoritiesResponse>
```

- JSON format

```
{
  "RequestId": "D6E46F10-F26C-4AA0-BB69-FE2743D9AE62",
}
```

1.14.7. RemoveAppsAuthorities

Description

You can call this operation to revoke the access permissions on a specified API from multiple applications. In this case, multiple applications map to a single API.

- This operation is intended for API providers and callers.
- Before you revoke access permissions, check by whom the permissions were granted. API providers can only revoke permissions granted by a Provider, and API callers can only revoke permissions granted by a Consumer.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to RemoveAppsAuthorities.
GroupId	String	Yes	The API group ID, which is generated by the system and globally unique.
StageName	String	Yes	The name of the runtime environment. Valid values: • RELEASE • TEST
ApiId	String	Yes	The API ID, which is generated by the system and globally unique.

Name	Type	Required	Description
Applds	String	Yes	The application IDs for the specified operation. Separate multiple application IDs with commas (.). A maximum of 100 application IDs can be entered.

Response parameters

Name	Type	Description
RequestId	String	The request ID.

Examples

Sample request

```
http://apigateway.cn-hangzhou.aliyuncs.com?Action=RemoveAppsAuthorities
&GroupId=523e8dc7bbe04613b5b1d726c2a7889d
&StageName=RELEASE
&ApiId=baacc592e63a4cb6a41920d9d3f91f38
&Applds=2386789,3286798
&<Common request parameters>
```

Sample responses

- XML format

```
<RemoveAppsAuthoritiesResponse>
  <RequestId>D6E46F10-F26C-4AA0-BB69-FE2743D9AE62</RequestId>
</RemoveAppsAuthoritiesResponse>
```

- JSON format

```
{
  "RequestId": "D6E46F10-F26C-4AA0-BB69-FE2743D9AE62",
}
```

1.15. Other operations

1.15.1. DescribeRegions

Description

You can call this operation to query supported regions.

This operation is intended for API providers and callers.

Request parameters

Name	Type	Required	Description
------	------	----------	-------------

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeRegions.

Response parameters

Name	Type	Description
RequestId	String	The request ID.
Regions	Region	The returned region information. It is an array consisting of Region data.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DescribeRegions
&<Common request parameters>
```

Sample responses

- XML format

```
<DescribeRegionsResponse>
  <RequestId>36BBBAD4-1CFB-489F-841A-8CA52EEA787E</RequestId>
  <Regions>
    <Region>
      <RegionId>cn-qingdao</RegionId>
      <EndPoint>apigateway.cn-qingdao.aliyuncs.com</EndPoint>
      <LocalName>China (Qingdao)</LocalName>
    </Region>
    <Region>
      <RegionId>cn-hangzhou</RegionId>
      <EndPoint>apigateway.cn-hangzhou.aliyuncs.com</EndPoint>
      <LocalName>China (Hangzhou)</LocalName>
    </Region>
    <Region>
      <RegionId>cn-beijing</RegionId>
      <EndPoint>apigateway.cn-beijing.aliyuncs.com</EndPoint>
      <LocalName>China (Beijing)</LocalName>
    </Region>
    <Region>
      <RegionId>cn-shenzhen</RegionId>
      <EndPoint>apigateway.cn-shenzhen.aliyuncs.com</EndPoint>
      <LocalName>China (Shenzhen)</LocalName>
    </Region>
  </Regions>
</DescribeRegionsResponse>
```

- JSON format

```
{
  "RequestId": "36BBBAD4-1CFB-489F-841A-8CA52EEA787E",
  "Regions": {
    "Region": [
      {
        "RegionId": "cn-qingdao",
        "EndPoint": "apigateway.cn-qingdao.aliyuncs.com",
        "LocalName": "China (Qingdao)"
      },
      {
        "RegionId": "cn-hangzhou",
        "EndPoint": "apigateway.cn-hangzhou.aliyuncs.com",
        "LocalName": "China (Hangzhou)"
      },
      {
        "RegionId": "cn-beijing",
        "EndPoint": "apigateway.cn-beijing.aliyuncs.com",
        "LocalName": "China (Beijing)"
      },
      {
        "RegionId": "cn-shenzhen",
        "EndPoint": "apigateway.cn-shenzhen.aliyuncs.com",
        "LocalName": "China (Shenzhen)"
      }
    ]
  }
}
```

1.15.2. DescribeSystemParameters

Description

You can call this operation to query configurable system parameters.

- This API is intended for API providers.
- The response of this API contains the system parameters that are optional in API definitions.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The operation that you want to perform. Set the value to DescribeSystemParameters.

Response parameters

Name	Type	Description
RequestId	String	The ID of the current request.

Name	Type	Description
SystemParams	Array	The returned information about system parameters. It is an array consisting of SystemParamItem data.

Examples

Sample request

```
https://apigateway.cn-qingdao.aliyuncs.com/?Action=DescribeSystemParameters
&<Common request parameters>
```

Sample responses

- XML format

```

<DescribeSystemParametersResponse>
  <RequestId>0CCDF65E-6050-412D-AD68-FA3D9196836C</RequestId>
  <SystemParameters>
    <SystemParameter>
      <Description>Client IP address</Description>
      <DemoValue>192.168.1.1</DemoValue>
      <ParamName>CaClientIp</ParamName>
      <ParamType>string</ParamType>
    </SystemParameter>
    <SystemParameter>
      <Description>Request domain name</Description>
      <DemoValue>api.aliyun.com</DemoValue>
      <ParamName>CaDomain</ParamName>
      <ParamType>string</ParamType>
    </SystemParameter>
    <SystemParameter>
      <Description>Request time (UTC)</Description>
      <DemoValue>2016-01-30T03:53:16Z</DemoValue>
      <ParamName>CaRequestHandleTime</ParamName>
      <ParamType>string</ParamType>
    </SystemParameter>
    <SystemParameter>
      <Description>ConsumerAppld</Description>
      <DemoValue>123456</DemoValue>
      <ParamName>CaAppld</ParamName>
      <ParamType>string</ParamType>
    </SystemParameter>
    <SystemParameter>
      <Description>RequestId</Description>
      <DemoValue>7157EBD9-4684-4827-B3B0-9B32D186819B</DemoValue>
      <ParamName>CaRequestId</ParamName>
      <ParamType>string</ParamType>
    </SystemParameter>
    <SystemParameter>
      <Description>Http Schema</Description>
      <DemoValue>https</DemoValue>
      <ParamName>CaHttpSchema</ParamName>
      <ParamType>string</ParamType>
    </SystemParameter>
    <SystemParameter>
      <Description>Proxy</Description>
      <DemoValue>AliCloudApiGateway</DemoValue>
      <ParamName>CaProxy</ParamName>
      <ParamType>string</ParamType>
    </SystemParameter>
  </SystemParameters>
</DescribeSystemParametersResponse>

```

- JSON format

```
{
  "RequestId": "0CCDF65E-6050-412D-AD68-FA3D9196836C",
  "SystemParameters": {
    "SystemParameter": [
      {
        "Description": "Client IP address",
        "DemoValue": "192.168.1.1",
        "ParamName": "CaClientIp",
        "ParamType": "string"
      },
      {
        "Description": "Request domain name",
        "DemoValue": "api.aliyun.com",
        "ParamName": "CaDomain",
        "ParamType": "string"
      },
      {
        "Description": "Request time (UTC)",
        "DemoValue": "2016-01-30T03:53:16Z",
        "ParamName": "CaRequestHandleTime",
        "ParamType": "string"
      },
      {
        "Description": "ConsumerAppId",
        "DemoValue": "123456",
        "ParamName": "CaAppId",
        "ParamType": "string"
      },
      {
        "Description": "RequestId",
        "DemoValue": "7157EBD9-4684-4827-B3B0-9B32D186819B",
        "ParamName": "CaRequestId",
        "ParamType": "string"
      },
      {
        "Description": "Http Schema",
        "DemoValue": "https",
        "ParamName": "CaHttpSchema",
        "ParamType": "string"
      },
      {
        "Description": "Proxy",
        "DemoValue": "AliCloudApiGateway",
        "ParamName": "CaProxy",
        "ParamType": "string"
      }
    ]
  }
}
```

1.16. Data types

1.16.1. ApiGroupAttribute

Description

The information about a specified API group.

Node name

ApiGroupAttribute

Subnodes

Name	Type	Description
GroupId	String	The API group ID, which is generated by the system and globally unique.
GroupName	String	The name of the API group.
SubDomain	String	The second-level domain name that corresponds to the API group and is used by the CNAME of the custom domain name.
Description	String	The description of the API group.
CreatedTime	String	The creation time (UTC) of the API group.
ModifiedTime	String	The last modification time (UTC) of the API group.
RegionId	String	The region to which the API group belongs.
TrafficLimit	Integer	The upper QPS limit of the API group. The default value is 500. You can increase the upper limit by submitting an application.
BillingStatus	String	The billing status of the API group. Valid values: • NORMAL: The API group is normal. • LOCKED: The API group is locked due to overdue payments.
IllegalStatus	String	The validity status of the API group. Valid values: • NORMAL: The API group is normal. • LOCKED: The API group is locked because it is not valid.

1.16.2. ApiHisItem

Description

The information about a published API.

Node name

ApiHistItem

Subnodes

Name	Type	Description
RegionId	String	The region to which the API belongs.
GroupId	String	The ID of the API group.
GroupName	String	The name of the API group.
StageName	String	The name of the runtime environment. Valid values: • RELEASE • TEST
ApiId	String	The ID of the API.
ApiName	String	The name of the API.
Description	String	The description of the API.
HistoryVersion	String	The history version of the API.
Status	String	Indicates whether an API version is effective. Valid values: ONLINE and OFFLINE.
DeployedTime	String	The publishing time (UTC) of the API.

1.16.3. ApiInfo

Description

The information about a published API.

Node name

ApiInfo

Subnodes

Name	Type	Description
RegionId	String	The region to which the API belongs.
GroupId	String	The ID of the API group.
GroupName	String	The name of the API group.

Name	Type	Description
StageName	String	The name of the runtime environment. Valid values: • RELEASE • TEST
ApId	String	The ID of the API.
ApiName	String	The name of the API.
Description	String	The API description.
Visibility	String	Indicates whether the API is public. Valid values: • PUBLIC • PRIVATE
BoundTime	String	The binding time of the API.

1.16.4. ApiPluginSummary

Description

The summary of an API that is bound to a plug-in.

Node name

ApiPluginSummary

Subnodes

Name	Type	Description
RegionId	String	The region where the API is located.
GroupId	String	The ID of the group to which the API belongs.
GroupName	String	The name of the group to which the API belongs.
ApId	String	The ID of the API.
ApiName	String	The name of the API.
Description	String	The description of the API.
StageName	String	The name of the stage.

1.16.5. ApiSummary

Description

The API summary information.

Node name

ApiSummary

Subnodes

Name	Type	Description
RegionId	String	The region to which the API belongs.
GroupId	String	The ID of the API group.
GroupName	String	The name of the API group.
ApiId	String	The ID of the API.
ApiName	String	The name of the API.
Description	String	The description of the API.
Visibility	String	Indicates whether the API is public. Valid values: • PUBLIC • PRIVATE
CreatedTime	String	The creation time (UTC) of the API.
ModifiedTime	String	The modification time (UTC) of the API.

1.16.6. AppAttribute

Description

The application information.

Node name

AppAttribute

Subnodes

Name	Type	Description
AppId	Long	The application ID.

Name	Type	Description
AppName	String	The application name.
Description	String	The application description.
CreatedTime	String	The creation time (UTC) of the application.
ModifiedTime	String	The modification time (UTC) of the application.

1.16.7. ApplItem

Description

The application information.

Node name

ApplItem

Subnodes

Name	Type	Description
AppId	Long	The application ID.
AppName	String	The application name.
Description	String	The application description.

1.16.8. AuthorizedApi

Description

The mappings between applications and an API.

Node name

AuthorizedApi

Subnodes

Name	Type	Description
RegionId	String	The region to which the API belongs.
GroupId	String	The API group ID, which is generated by the system and globally unique.
GroupName	String	The name of the API group.

Name	Type	Description
StageName	String	The name of the runtime environment. Valid values: • RELEASE • TEST
Operator	String	The authorizer. Valid values: • PROVIDER: API owner • CONSUMER: API caller
ApId	String	The unique identifier of the API, which is automatically generated by the system.
ApiName	String	The name of the API.
AuthorizationSource	String	The authorization source. Valid values: • CONSOLE • API
Description	String	The authorization description.
AuthorizedTime	String	The authorization time (UTC).

1.16.9. AuthorizedApp

Description

The application authorization information of APIs.

Node name

AuthorizedApp

Subnodes

Name	Type	Description
StageName	String	The name of the runtime environment. Valid values: • RELEASE • TEST
AppId	Long	The application ID, which is generated by the system and globally unique.
AppName	String	The name of the application.
Operator	String	The authorizer. Valid values: • PROVIDER: API provider • CONSUMER: API caller

Name	Type	Description
AuthorizationSource	String	The authorization source. Valid values: • CONSOLE • API
Description	String	The authorization description.
AuthorizedTime	String	The authorization time (UTC).

1.16.10. ConstantParameter

Description

The information about constant input parameters.

Node name

ConstantParameter

Subnodes

Name	Type	Description
ServiceParameterName	String	The name of the backend parameter.
ConstantValue	String	The parameter value.
Location	String	The parameter location. Valid values: BODY, HEAD, QUERY, and PATH.
Description	String	The description of the parameter.

1.16.11. CustomDomain

Description

The domain name information.

Node name

CustomDomain

Subnodes

Name	Type	Description
DomainName	String	The domain name.
CertificateId	String	The unique ID of the SSL certificate, which is automatically generated by the system.

Name	Type	Description
CertificateName	String	The SSL certificate name.
DomainCNAMEStatus	String	The domain name resolution status. Valid values: • RESOLVED • UNRESOLVED
DomainBindingStatus	String	The binding status of the custom domain name. Valid values: • BINDING: The domain name has been bound. • BOUND: The domain name has not been bound.

1.16.12. DeployedApiItem

Description

The information about a published API.

Node name

DeployedApiItem

Subnodes

Name	Type	Description
RegionId	String	The region to which the API belongs.
GroupId	String	The ID of the API group.
GroupName	String	The name of the API group.
StageName	String	The name of the runtime environment. Valid values: • RELEASE • TEST
ApiId	String	The ID of the API.
ApiName	String	The name of the API.
Description	String	The description of the API.
Visibility	String	Indicates whether the API is public. Valid values: • PUBLIC • PRIVATE
DeployedTime	String	The publishing time (UTC) of the API.

1.16.13. DeployedInfo

Description

The information about API publishing.

Node name

DeployedInfo

Subnodes

Name	Type	Description
StageName	String	The name of the runtime environment. Valid values: RELEASE and TEST.
EffectiveVersion	String	The effective version.
DeployedStatus	String	The deployment status. Valid values: DEPLOYED and NONDEPLOYED.

1.16.14. DomainItem

Description

The domain name used to call an API.

Node name

DomainItem

Subnodes

Name	Type	Description
DomainName	String	The domain name used to call an API.

1.16.15. ErrorCodeSample

Description

The sample error codes.

Node name

ErrorCodeSample

Subnodes

Name	Type	Description
Code	String	The error code.
Message	String	The error message.
Description	String	The error description.

1.16.16. MonitorItem

Description

The monitoring metric information.

Node name

MonitorItem

Subnodes

Name	Type	Description
ItemTime	String	The time of the monitoring metric. The time format follows the ISO 8601 standard and UTC time is used. The format is YYYY-MM-DDThh:mm:ssZ.
ItemValue	String	The value corresponding to the monitoring metric.

1.16.17. PluginAttribute

Description

The details of a plug-in.

Node name

PluginAttribute

Subnodes

Name	Type	Description
PluginId	String	The ID of the plug-in.
PluginType	String	The type of the plug-in.
PluginName	String	The name of the plug-in.
PluginData	String	The definition statement of the plug-in.

Name	Type	Description
RegionId	String	The region where the plug-in is located.
Description	String	The description of the plug-in.
CreatedTime	String	The time when the plug-in was created. The time is displayed in GMT.
ModifiedTime	String	The time when the plug-in was modified. The time is displayed in GMT.

1.16.18. Region

Description

The region information.

Node name

Region

Subnodes

Name	Type	Description
RegionId	String	The region ID.
LocalName	String	The region name.
Endpoint	String	The domain name, such as gateway.cn-hangzhou.aliyuncs.com.

1.16.19. RequestConfig

Description

The frontend information.

Node name

RequestConfig

Subnodes

Name	Type	Description
RequestProtocol	String	The protocol type supported by the API. Valid values: HTTP and HTTPS. Separate multiple values with commas (,), such as "HTTP,HTTPS".

Name	Type	Description
RequestHttpMethod	String	The HTTP method. Valid values: GET , POST , DELETE, PUT , HEADER, TRACE, PATCH, CONNECT , and OPTIONS.
RequestPath	String	The API path. For example, in API address <i>http://api.a.com:8080/object/add?key1=value1&key2=value2</i> , RequestPath is /object/add.
BodyFormat	String	The server data transmission method used for POST and PUT requests. Valid values: FORM and STREAM. FORM indicates that data in key-value pairs is transmitted as forms. STREAM indicates that data is transmitted as byte streams.
PostBodyDescription	String	The description of the request body.

1.16.20. RequestParameter

Description

The information about frontend input parameters.

Node name

RequestParameter

Subnodes

Name	Type	Description
ApiParameterName	String	Parameter
Location	String	The parameter location. Valid values: BODY, HEAD, QUERY, and PATH.
ParameterType	String	The parameter type. Valid values: String, Int, Long, Float, Double, and Boolean.
Required.	String	Indicates whether the parameter is required. Valid values: REQUIRED and OPTIONAL.
DefaultValue	String	The default value.
DemoValue	String	An example of the parameter value.
MaxValue	Long	The maximum parameter value when ParameterType is set to Int, Long, Float, or Double.
MinValue	Long	The minimum parameter value when ParameterType is set to Int, Long, Float, or Double.

Name	Type	Description
MaxLength	Long	The maximum parameter length when ParameterType is set to String.
MinLength	Long	The minimum parameter length when ParameterType is set to String.
RegularExpression	String	The regular expression used for parameter validation when ParameterType is set to String.
JsonScheme	String	The JSON Schema used for JSON validation when ParameterType is set to String.
EnumValue	String	The hash values that can be entered when ParameterType is set to Int, Long, Float, Double, or String. Separate different values with commas (,), such as 1,2,3,4,9 or A,B,C,E,F.
DocShow	String	Indicates whether the document is public. Valid values: PUBLIC and PRIVATE.
DocOrder	Integer	The order in the document.
Description	String	The description of the parameter.

1.16.21. ServiceConfig

Description

The information about a backend service call.

Node name

ServiceConfig

Subnodes

Name	Type	Description
ServiceProtocol	String	The protocol used by the backend service. Valid values: HTTP and HTTPS.
ServiceAddresses	String	The address used to call the backend service. For example, in the backend service address <i>http://api.a.com:8080/object/add?key1=value1&key2=value2</i> , ServiceAddress is <i>http://api.a.com:8080</i> .
ServicePath	String	The path used to call the backend service. For example, in the backend service address <i>http://api.a.com:8080/object/add?key1=value1&key2=value2</i> , ServicePath is <i>/object/add</i> .
ServiceHttpMethod	String	The HTTP method used to call a backend service. Valid values: GET, POST, DELETE, PUT, HEADER, TRACE, PATCH, CONNECT, and OPTIONS.

Name	Type	Description
ServiceTimeout	String	The timeout period of the backend service, in millisecond.
Mock	String	Indicates whether the Mock mode is enabled. Valid values: TRUE and FALSE.
MockResult	String	The result returned when the Mock mode is enabled.

1.16.22. ServiceParameter

Description

The information about input parameters for a backend service call.

Node name

ServiceParameter

Subnodes

Name	Type	Description
ServiceParameterName	String	The name of the backend parameter.
Location	String	The parameter location. Valid values: BODY, HEAD, QUERY, and PATH.
ParameterType	String	The type of the backend parameter. Valid values: STRING, NUMBER, and BOOLEAN.

1.16.23. ServiceParameterMap

Description

The mappings between frontend input parameters and backend input parameters.

Node name

ServiceParameterMap

Subnodes

Name	Type	Description
ServiceParameter Name	String	The name of the backend parameter.

Name	Type	Description
RequestParametrName	String	The name of the corresponding frontend input parameter. It must be included in RequestParametersObject and matches ApiParameterName in RequestParameter data.

1.16.24. Special

Description

The special throttling policy.

Node name

Special

Subnodes

Name	Type	Description
SpecialKey	String	The AppId or user account corresponding to SpecialType.
TrafficValue	Integer	The throttling value.

1.16.25. SpecialPolicy

Description

The information about a special throttling policy.

Node name

SpecialPolicy

Subnodes

Name	Type	Description
SpecialType	String	The type of the special throttling policy. Valid values: • APP • USER
Specials	Array	The returned information about a special throttling policy. It is an array consisting of Special data.

1.16.26. StageInfo

Description

The runtime environment information.

Node name

StageInfo

Subnodes

Name	Type	Description
StageId	String	The ID of the runtime environment.
StageName	String	The name of the runtime environment.
Description	String	The description of the runtime environment.

1.16.27. SystemParameter

Description

The system input parameter.

Node name

SystemParameter

Subnodes

Name	Type	Description
ParameterName	String	The name of the system parameter. Valid values: CaClientIp, CaDomain, CaRequestHandleTime, CaAppId, CaRequestId, CaHttpSchema, and CaProxy.
ServiceParameter Name	String	The name of the corresponding backend parameter.
Location	String	The parameter location. Valid values: BODY, HEAD, QUERY, and PATH.
DemoValue	String	An example of the parameter value.
Description	String	The description of the system parameter.

1.16.28. SystemParamItem

Description

The information about a specified system parameter.

Node name

SystemParamItem

Subnodes

Name	Type	Description
ParamName	String	The name of the system parameter.
ParamType	String	The type of the system parameter.
DemoValue	String	An example of the parameter value.
Description	String	The description of the system parameter.

1.17. Error codes

When you call an API management operation, such as `CreateAPI`, `ModifyAPI`, or `DeleteAPI`, error codes that are listed in the following tables may be reported.

Server errors

The reported HTTP status code is 5XX, which indicates that services are unavailable. We recommend that you call the API operation again.

Error code	Error message	HTTP status code	Description	Solution
ServiceUnavailable	The request has failed due to a temporary failure of the server.	503	The error message returned because an API response times out.	Try again later.
InternalServerError	The request processing has failed due to some unknown error, exception or failure.	500	The error message returned because an internal error has occurred.	Submit a ticket for consulting.

Client errors

The reported HTTP status code is 4XX, which indicates a business error. The business error can be a parameter error, an error due to access control, or a business logic error. You need to carefully view error information before you troubleshoot issues.

Error code	Error message	HTTP status code	Description	Solution
------------	---------------	------------------	-------------	----------

Error code	Error message	HTTP status code	Description	Solution
Repeated%s	The specified %s is repeated.	400	The error message returned because the parameter has been used. (%s is a placeholder. A specified parameter name or prompt will be provided when you call an API operation.)	Modify the parameter and try again later.
RepeatedCommit	Resubmit request.	400	The error message returned because the request has been submitted.	Do not repeatedly submit the same request .
Missing%s	The %s is mandatory for this action.	400	The error message returned because the %s parameter is not specified.	Specify the %s parameter as prompted and try again later.
MissingAppIdOrAppOwner	AppId or AppOwner must have a valid value.	400	The error message returned because the AppId or AppOwner parameter is not specified.	Specify the AppId or AppOwner parameter, or both of them.
Invalid%s	The specified parameter %s value is not valid.	400	The error message returned because the specified %s parameter is invalid.	View parameter configuration limits, modify the parameter as prompted, and try again later.
NotFound%s	Cannot find resource according to your specified %s.	400	The error message returned because no resources can be found based on the settings of the specified %s parameter.	Check whether the %s parameter is correctly specified.

Error code	Error message	HTTP status code	Description	Solution
InvalidFormat%s	The specified parameter %s value is not well formatted.	400	The error message returned because the value of the %s parameter is in an invalid format.	View requirements for the format of the parameter value, modify the format, and try again later.
Duplicate%s	The specified parameter %s value is duplicate.	400	The error message returned because the specified %s parameter has been used.	Change the parameter value and try again later.
DependencyViolation%s	The specified %s has %s definitions.	400	The error message returned because the parameter dependency is invalid.	Remove the dependency and then delete the parameter. A parameter that others are dependent on cannot be deleted.
Forbidden%s	Not allowed to operate on the specified %s.	403	The error message returned because you are not allowed to perform specified operations.	Obtain the permissions to perform specified operations.
NoPermission	User is not authorized to operate on the specified resource.	403	The error message returned because you are not authorized to perform operations on the specified resource.	Grant permissions of operations on the specified resource.
ExceedLimit%s	The specified %s count exceeds the limit.	400	The error message returned because the number of APIs, API groups, or apps created under your Alibaba Cloud account exceeds the quota.	Adjust the number.

Error code	Error message	HTTP status code	Description	Solution
UserNotFound	The specified user can not be found.	404	The error message returned because the specified user does not exist.	
Invalid%s.LengthLimit	The parameter %s length exceeds the limit.	400	The error message returned because the value of the %s parameter exceeds the upper limit in length.	Change the parameter value and try again later.
InvalidApiDefault	The ApiDefault value exceeds limit.	400	The error message returned because the value of the ApiDefault parameter exceeds the threshold.	Change the parameter value. Maximum value: 100000000.
InvalidAppDefault	The AppDefault value must smaller than the UserDefault and ApiDefault.	400	The error message returned because the value of the AppDefault parameter does not meet requirements.	Change the value of the AppDefault parameter. The value must be less than that of the ApiDefault parameter and also less than that of the UserDefault parameter.
InvalidUserDefault	The UserDefault value must bigger than the AppDefault and smaller than the ApiDefault.	400	The error message returned because the value of the UserDefault parameter does not meet requirements.	Change the value of the UserDefault parameter. The value must be greater than that of the AppDefault parameter but less than that of the ApiDefault parameter.
InvalidParamMapping	Parameters must be fully mapped.	400	The error message returned because the parameter mapping is invalid.	When you create an API, map each request parameter to a backend parameter.

Error code	Error message	HTTP status code	Description	Solution
EqualSignature	The new signature is the same as the old.	400	The error message returned because the new backend signature key is the same as the old one.	Modify the new backend signature key. Make sure that the newly configured key-secret pair is different from the old one.
CertificateNotMatch	The domain does not match the one in the certificate.	400	The error message returned because the specified domain name does not match the domain name in the certificate.	Make sure that the specified domain name matches the domain name in the certificate.
CertificateKeyNotMatch	The certificate private key does not match the public key.	400	The error message returned because the public and private keys in the certificate do not match.	Check the certificate to match the public and private keys in the certificate.

Common client errors

The reported HTTP status code is 4XX, which indicates a business error and may be reported when you call APIs of Alibaba Cloud services. The business error can be an invalid request format, an incorrect request method, missing required parameters, an invalid parameter value format, an invalid signature, or an error due to throttling. You need to carefully view error information before you troubleshoot issues.

Description	Error code	Error message	HTTP status code	Solution
The specified API cannot be found.	InvalidApi.NotFound	Specified api is not found,please check your url and method.	404	Check whether the specified API operation name is valid. The name is case-sensitive.
A required parameter is not specified.	Missing{Parameter Name}	{ParameterName} is mandatory for this action.	400	Specify the required parameter.
The AccessKey ID cannot be found.	InvalidAccessKeyId.NotFound	Specified access key is not found.	404	Check whether a valid AccessKey ID is used when you call an API operation.

Description	Error code	Error message	HTTP status code	Solution
The AccessKey ID is disabled.	InvalidAccessKeyId.Inactive	Specified access key is disabled.	400	Check whether the AccessKey pair is available.
The format of the date or timestamp is invalid.	InvalidTimeStamp.Format	Specified time stamp or date value is not well formatted.	400	Check the format.
The difference between the client time and server time exceeds 15 minutes.	InvalidTimeStamp.Expired	Specified time stamp or date value is expired.	400	Check the timestamp.
The SignatureNonce setting is repeated.	SignatureNonceUsed	Specified signature nonce was used already.	400	Check whether the SignatureNonce setting is repeated when you call an API operation at the client.
The returned parameter value is in an invalid format.	InvalidParameter.Format	Specified parameter format is not valid.	400	Specify the parameter only in the XML or JSON format.
The parameter value verification fails.	Invalid{ParameterName}	Specified parameter {ParameterName} is not valid.	400	Check the parameter value.
The HTTP request method is not supported.	UnsupportedHTTPMethod	Specified signature is not matched with our calculation.	400	Check the request method.
The signature method is not supported.	InvalidSignatureMethod	Specified signature method is not valid.	400	Specify an available signature method. This parameter can be left empty.
The signature verification fails.	SignatureDoesNotMatch	Specified signature is not matched with our calculation.	400	Check the signature and resolve the issue accordingly.
The user-level call frequency exceeds the threshold.	Throttling.User	Request was denied due to user flow control.	400	Reduce the call frequency.

Description	Error code	Error message	HTTP status code	Solution
The API-level call frequency exceeds the threshold.	Throttling.API	Request was denied due to api flow control.	400	Reduce the call frequency.
The AccessKey ID is missing.	MissingSecurityToken	SecurityToken is mandatory for this action.	400	Check whether you specify a valid AccessKey ID.