Auto Scaling

API Reference

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Security Declaration

Vulnerability

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

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

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

Contents

1 Before You Start

Welcome to *Auto Scaling API Reference*. Auto Scaling (AS) is a service that automatically adjusts resources (Elastic Cloud Server and bandwidth resources) based on your service requirements and configured AS policies. You can specify AS policies based on service requirements. These policies free you from having to repeatedly adjust resources to keep up with service changes and demand spikes, helping you reduce resource and labor costs. This document describes how to use application programming interfaces (APIs) to perform operations on AS groups, such as creating, deleting, or modifying AS groups. For details about all supported operations, see **API Overview**.

If you plan to access AS through an API, ensure that you are familiar with AS concepts. For details, see *Auto Scaling User Guide*.

AS supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For details about API calling, see **Calling APIs**.

Endpoints

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions.

Concepts

- Account

  An account is created upon successful signing up. The account has full access permissions for all of its cloud services and resources. It can be used to reset user passwords and grant user permissions. The account is a payment entity, which should not be used directly to perform routine management. To ensure account security, create Identity and Access Management (IAM) users and grant them permissions for routine management.

- User

  An IAM user is created by an account in IAM to use cloud services. Each IAM user has its own identity credentials (password and access keys).

  API authentication requires information such as the account name, username, and password.

- Region

Regions are divided based on geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service (EVS), Object Storage Service (OBS), Virtual Private Cloud (VPC), Elastic IP (EIP), and Image Management Service (IMS), are shared within the same region. Regions are classified into universal regions and dedicated regions. A universal region provides universal cloud services for common tenants. A dedicated region provides specific services for specific tenants.

For details, see **Region and AZ**.

- AZ

  An AZ comprises of one or more physical data centers equipped with independent ventilation, fire, water, and electricity facilities. Computing, network, storage, and other resources in an AZ are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to allow you to build cross-AZ high-availability systems.

- Project

  A project corresponds to a region. Default projects are defined. Users can be granted permissions in a default project to access all resources under their accounts in the region associated with the project. If you need more refined access control, create subprojects under a default project and create resources in subprojects. Then you can assign users the permissions required to access only the resources in the specific subprojects.

- Enterprise project

  Enterprise projects group and manage resources across regions. Resources in different enterprise projects are logically isolated.

  For details about enterprise projects and about how to obtain enterprise project IDs, see *Enterprise Management User Guide*.

2 API Overview

By using the APIs provided by AS, you can use all the functions of AS, for example, creating an AS group. **Table 2-1** lists the APIs supported by AS.

Table 2-1 AS APIs

Function	Description
AS group	Create, query, modify, and delete AS groups.
AS configuration	Create, query, and delete AS configurations.
Instance	Query instances and remove instances from AS groups.
AS policy	Create, query, modify, and delete AS policies.
AS policy execution log	Query execution records of an AS policy.
Scaling action log	Query scaling action logs.
Quota	Query the total quota and used quota of AS groups, AS configurations, AS policies, and instances for a specified tenant.
Notification	Configure AS group notifications, query AS group notifications, and delete AS group notifications.
Lifecycle hook	Create, query, modify, and delete lifecycle hooks.
Tag management	Query tenant or resource tags, create or delete tags, and query resource instances.
API management	Query API versions.

3 Calling APIs

3.1 Making an API Request

This section describes the structure of a REST API request, and uses the IAM API for **creating an IAM user** as an example to demonstrate how to call an API.

Request URI

A request URI is in the following format:

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

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

Table 3-1 URI parameter description

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

IAM is a global service. You can create an IAM user using the endpoint of IAM in any region. For example, to create an IAM user in the **EU-Dublin** region, obtain the endpoint of IAM (**iam.myhuaweicloud.eu**) for this region and the **resource-path** (**/v3.0/OS-USER/users**) in the URI of the API for **creating an IAM user**. Then construct the URI as follows:

https://iam.myhuaweicloud.eu/v3.0/OS-USER/users

☐ NOTE

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

Request Methods

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

Table 3-2 HTTP methods

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

For example, in the case of the API for **creating an IAM user**, the request method is **POST**. An example request is as follows:

POST https://iam.myhuaweicloud.eu/v3.0/OS-USER/users

Request Header

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

Common request header fields are as follows.

Table 3-3 Common request header fields

Parameter	Description	Mandatory	Example Value
Host	Specifies the server domain name and port number of the resources being requested. The value can be obtained from the URL of the service API. The value is in the format of *Hostname:Port number*. If the port number is not specified, the default port is used. The default port number for **https** is **443**.	No This field is mandatory for AK/SK authentication.	code.test.com or code.test.com:443
Content-Type	Specifies the type (or format) of the message body. The default value **application/json** is recommended. Other values of this field will be provided for specific APIs if any.	Yes	application/json
Content-Length	Specifies the length of the request body. The unit is byte.	No	3495
X-Project-Id	Specifies the project ID. Obtain the project ID by following the instructions in **Obtaining a Project ID**.	No This field is mandatory for requests that use AK/SK authentication in the Dedicated Cloud (DeC) scenario or multi-project scenario.	e9993fc787d94b6c886cbaa340f9c0f4

Parameter	Description	Mandatory	Example Value
X-Auth-Token	Specifies the user token. It is a response to the API for **obtaining a user token** (This is the only API that does not require authentication). After the request is processed, the value of **X-Subject-Token** in the response header is the token value.	No This field is mandatory for token authentication.	The following is part of an example token: MIIPAgYJKoZIhvc NAQcCo...ggg1B BIINPXsidG9rZ

☐ **NOTE**

In addition to supporting authentication using tokens, APIs support authentication using AK/SK, which uses SDKs to sign a request. During the signature, the **Authorization** (signature authentication) and **X-Sdk-Date** (time when a request is sent) headers are automatically added in the request.

For more details, see "Authentication Using AK/SK" in **Authentication**.

The following shows an example request of the API for **creating an IAM user** when AK/SK authentication is used:

```
POST https://iam.myhuaweicloud.eu/v3.0/OS-USER/users
Content-Type: application/json
X-Sdk-Date: 20240416T095341Z
Authorization: SDK-HMAC-SHA256 Access=***************, SignedHeaders=content-type;host;x-sdk-date,
Signature=****************
```

(Optional) Request Body

This part is optional. A request body is generally sent in a structured format (for example, JSON or XML), which is specified by **Content-Type** in the request header. It is used to transfer content other than the request header. If the request body contains full-width characters, these characters must be coded in UTF-8.

The request body varies depending on APIs. Certain APIs do not require the request body, such as the APIs requested using the GET and DELETE methods.

The following shows an example request (a request body included) of the API for **creating an IAM user**. You can learn about request parameters and related description from this example. The bold parameters need to be replaced for a real request.

- **accountid**: account ID of an IAM user

- **username**: name of an IAM user

- **email**: email of an IAM user

- **password**: login password of an IAM user

```
POST https://iam.myhuaweicloud.eu/v3.0/OS-USER/users
Content-Type: application/json
```

```
X-Sdk-Date: 20240416T095341Z
Authorization: SDK-HMAC-SHA256 Access=***************, SignedHeaders=content-type;host;x-sdk-date,
Signature=****************

{
    "user": {
        "domain_id": "accountid",
        "name": "username",
        "password": "**********",
        "email": "email",
        "description": "IAM User Description"
    }
}
```

If all data required for the API request is available, you can send the request to call the API through **curl**, **Postman**, or coding.

3.2 Authentication

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

- AK/SK authentication: Requests are encrypted using AK/SK pairs. AK/SK authentication is recommended because it is more secure than token authentication.

- Token authentication: Requests are authenticated using tokens.

AK/SK Authentication

📖 NOTE

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

- The AK/SK can either be permanent or temporary. If it is temporary, the **X-Security-Token** field must be included in the request header. The value is the security token of the temporary AK/SK.

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

- AK: access key ID, which is a unique identifier used in conjunction with a secret access key to sign requests cryptographically.

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

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

📖 NOTE

The signing SDK is only used for signing requests and is different from the SDKs provided by services.

Token Authentication

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

A token specifies temporary permissions in a computer system. During API authentication using a token, the token is added to requests to get permissions for calling the API. You can obtain a token by calling the **Obtaining a User Token** API.

IMS is a project-level service. When you call the API, set **auth.scope** in the request body to **project**.

```
{
    "auth": {
        "identity": {
            "methods": [
                "password"
            ],
            "password": {
                "user": {
                    "name": "username",   // IAM user name
                    "password": $ADMIN_PASS, //IAM user password. You are advised to store it in ciphertext in
the configuration file or an environment variable and decrypt it when needed to ensure security.
                    "domain": {
                        "name": "domainname"  // Name of the account that the IAM user belongs to
                    }
                }
            }
        },
        "scope": {
            "project": {
                "name": "xxxxxxxx"    // Project name
            }
        }
    }
}
```

After a token is obtained, the **X-Auth-Token** header field must be added to requests to specify the token when calling other APIs. For example, if the token is **ABCDEFG....**, **X-Auth-Token: ABCDEFG....** can be added to a request as follows:

```
GET https://iam.myhuaweicloud.eu/v3/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFG....
```

3.3 Response

Status Codes

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

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request.

For example, if status code **201** is returned for calling the API used to **create an IAM user**, the request is successful.

Response Header

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

Figure 3-1 shows the response header fields for the API used to **create an IAM user**. The **X-Subject-Token** header field is the desired user token. You can use the token to authenticate other API calls.

> 📖 **NOTE**
>
> For security purposes, you are advised to set the token in ciphertext in configuration files or environment variables and decrypt it when using it.

Figure 3-1 Header fields of the response to the request for creating an IAM user

```
"X-Frame-Options": "SAMEORIGIN",
"X-IAM-ETag-id": "2562365939-d8f6f12921974cb097338ac11fceac8a",
"Transfer-Encoding": "chunked",
"Strict-Transport-Security": "max-age=31536000; includeSubdomains;",
"Server": "api-gateway",
"X-Request-Id": "af2953f2bcc67a42325a69a19e6c32a2",
"X-Content-Type-Options": "nosniff",
"Connection": "keep-alive",
"X-Download-Options": "noopen",
"X-XSS-Protection": "1; mode=block;",
"X-IAM-Trace-Id": "token_____null_af2953f2bcc67a42325a69a19e6c32a2",
"Date": "Tue, 21 May 2024 09:03:40 GMT",
"Content-Type": "application/json; charset=utf8"
```

(Optional) Response Body

This part is optional. The body of a response is often returned in structured format (for example, JSON or XML) as specified in the **Content-Type** header field. The response body transfers content except the response header.

The following shows part of the response body for the API used to **create an IAM user**.

```
{
    "user": {
        "id": "c131886aec...",
        "name": "IAMUser",
        "description": "IAM User Description",
        "areacode": "",
        "phone": "",
        "email": "***@***.com",
        "status": null,
        "enabled": true,
        "pwd_status": false,
        "access_mode": "default",
        "is_domain_owner": false,
        "xuser_id": "",
        "xuser_type": "",
        "password_expires_at": null,
        "create_time": "2024-05-21T09:03:41.000000",
        "domain_id": "d78cbac1..........",
        "xdomain_id": "30086000........",
        "xdomain_type": "",
        "default_project_id": null
    }
}
```

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

```
{
    "error_msg": The request message format is invalid.",
    "error_code": "AS.0001"
}
```

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

3.4 Obtaining a Project ID

Scenarios

A project ID is required for some URLs when an API is called. Therefore, you need to obtain a project ID in advance. Two methods are available:

- **Obtain the Project ID by Calling an API**
- **Obtain the Project ID from the Console**

Obtain the Project ID by Calling an API

You can obtain a project ID by calling the API used to **query projects based on specified criteria**.

The API used to obtain a project ID is GET https://{Endpoint}/v3/projects. {Endpoint} is the IAM endpoint and can be obtained from Regions and Endpoints. For details about API authentication, see **Authentication**.

The following is an example response. The value of **id** is the project ID.

```
{
    "projects": [
        {
            "domain_id": "65ewtrgaggshhk1223245sghjlse684b",
            "is_domain": false,
            "parent_id": "65ewtrgaggshhk1223245sghjlse684b",
            "name": "project_name",
            "description": "",
            "links": {
                "next": null,
                "previous": null,
                "self": "https://www.example.com/v3/projects/a4adasfjljaaaakla12334jklga9sasfg"
            },
            "id": "a4adasfjljaaaakla12334jklga9sasfg",
            "enabled": true
        }
    ],
    "links": {
        "next": null,
        "previous": null,
        "self": "https://www.example.com/v3/projects"
    }
}
```

Obtain a Project ID from the Console

To obtain a project ID from the console, perform the following operations:

1. Log in to the management console.
2. Click the username and select **My Credentials** from the drop-down list.

   On the **API Credentials** page, view the project ID in the project list.

4 Getting Started

4.1 Creating an AS Group

This section describes how to create an AS group by calling a series of AS APIs.

📖 **NOTE**

The validity period of a token obtained from IAM is 24 hours. If you want to use a token for authentication, cache it to avoid frequently calling the IAM API.

Involved APIs

To use token authentication, you need to obtain a token and add **X-Auth-Token** to the request header of API calls.

- API for obtaining tokens from IAM
- APIs used to create an AS group

Procedure

1. Obtain the token by following instructions in **Authentication**.
2. Obtain the project ID (**project_id**). For details, see **Obtaining a Project ID**.
3. Add the **Content-Type** key to the request header. The value of **Content-Type** is **application/json**.
4. Add the **X-Auth-Token** key to the request header. The value is the token obtained in step 1.
5. Send **POST https://*AS endpoint*/v1/{*project_id*}/scaling_group**. *project_id* is the project ID obtained in step 2.
6. Specify the following parameters in the request body:

```
{
    "scaling_group_name": "GroupNameTest",//AS group name (This is a mandatory string.)
    "scaling_configuration_id": "47683a91-93ee-462a-a7d7-484c006f4440",//AS configuration ID (This
is an optional string, but an AS group to be enabled must have an AS configuration.)
    "desire_instance_number": 0,//Expected instances (This is an optional integer.)
    "min_instance_number": 0,//Minimum instances (This is an optional integer.)
    "max_instance_number": 0,//Maximum instances (This is an optional integer.)
    "cool_down_time": 200,//Cooldown period (This is an optional integer.)
    "health_periodic_audit_method": "NOVA_AUDIT",//Instance health check method (This is an
```

```
optional string.)
    "health_periodic_audit_time": 5,//Instance health check period (This is an optional integer.)
    "instance_terminate_policy": "OLD_CONFIG_OLD_INSTANCE",//Instance removal policy (This is an
optional string.)
    "vpc_id": "a8327883-6b07-4497-9c61-68d03ee193a",//VPC information (This is a mandatory string.)
    "networks": [
        {
            "id": "3cd35bca-5a10-416f-8994-f79169559870"
        }
    ]//Subnet information (This is a mandatory list data structure.)
}
```

If the request is responded, **scaling_group_id** is returned, indicating that the AS group is successfully created.

If the request fails, an error code and error information are returned. For details, see **Error Codes**.

7. You can query, modify, and delete an AS group based on the obtained **scaling_group_id**.

5 APIs

5.1 AS Groups

5.1.1 Creating an AS Group

Function

An AS group is a collection of instances that are used in the same scenario. It is the basis for enabling or disabling AS policies and performing scaling actions. An AS group specifies parameters, such as the maximum number of instances, expected number of instances, minimum number of instances, VPC, subnet, and load balance settings.

- Each account can create a maximum of 10 AS groups by default.
- If a load balancer is associated with an AS group, AS automatically associates the load balancer with or dissociates the load balancer from instances when the instances are added to or removed from the AS group.
- If ELB health check is enabled for an AS group, the instances in the AS group must use all the listening ports of each load balancer for health check. You can configure these ports in the security group of the instances.

URI

POST /autoscaling-api/v1/{project_id}/scaling_group

Table 5-1 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.

Request

Table **5-2** Request parameters

Parameter	Mandatory	Type	Description
scaling_group _name	Yes	String	Specifies the AS group name. It contains 1 to 64 characters. Only letters, digits, underscores (_), and hyphens (-) are allowed.
scaling_config uration_id	Yes	String	Specifies the AS configuration ID, which can be obtained using the API for querying AS configurations. For details, see **Querying AS Configurations**.
desire_instanc e_number	No	Integer	Specifies the expected number of instances. The default value is the minimum number of instances. The value ranges from the minimum number of instances to the maximum number of instances.
min_instance_ number	No	Integer	Specifies the minimum number of instances. The default value is **0**.
max_instance _number	No	Integer	Specifies the maximum number of instances. The default value is **1**. The value is an integer ranging from 0 to 300.

Parameter	Mandatory	Type	Description
cool_down_time	No	Integer	Specifies the cooldown period (in seconds). The value ranges from **0** to **86400** and defaults to **300**. After a scaling action is complete, the cooldown period starts. During the cooldown period, AS denies all scaling requests triggered by alarm-based policies. Scaling requests triggered manually or by scheduled or periodic policies are not affected. **NOTE** ● When an AS group scales out, scale-in requests triggered manually or by scheduled and periodic policies will be executed immediately after the scale-out is complete, without being affected by the cooldown period. ● When an AS group scales in, scale-out requests triggered manually or by scheduled and periodic policies will be executed immediately after the scale-in is complete, without being affected by the cooldown period.
lb_listener_id	No	String	Specifies the ID of a listener added to a load balancer. You can add up to six listeners. Separate listener IDs with commas (,). This parameter is alternative to **lbaas_listeners**.
lbaas_listeners	No	Array of **lbaas_listeners** objects	Specifies information about a load balancer. You can add up to six load balancers. This parameter is in list data structure. For details, see **Table 5-3**.
available_zones	No	Array of strings	Specifies the AZ information. The instances added in a scaling action will be created in a specified AZ. If you do not specify an AZ, the system automatically specifies one.

Parameter	Mandatory	Type	Description
networks	Yes	Array of **networks** objects	Specifies network information. You can select up to five subnets. The first subnet you select is used by the primary NICs of ECSs by default. For the information about the data structure, see **Table 5-4**.
security_groups	No	Array of **security_groups** objects	Specifies the security group information. Only one security group can be selected. For the information about the data structure, see **Table 5-7**. If a security group is specified both in the AS configuration and the AS group, scaled-out instances will be added to the security group specified in the AS configuration. If a security group is not specified in either of them, scaled-out instances will be added to the default security group. For your convenience, specify a security group in the AS configuration.
vpc_id	Yes	String	Specifies the VPC ID, which can be obtained using the API for querying VPCs. For details, see "Querying VPCs" in *Virtual Private Network API Reference*.
health_periodic_audit_method	No	String	Specifies the health check method for instances in the AS group. The health check methods include **ELB_AUDIT** and **NOVA_AUDIT**. When load balancing is configured for an AS group, the default value is **ELB_AUDIT**. Otherwise, the default value is **NOVA_AUDIT**. ● **ELB_AUDIT**: indicates the ELB health check, which takes effect in an AS group with a listener. ● **NOVA_AUDIT**: indicates the ECS instance health check, which is the health check method that comes with AS.

Parameter	Mandatory	Type	Description
health_period ic_audit_time	No	Integer	Specifies the health check interval. The value can be **1**, **5**, **15**, **60**, or **180** in the unit of minutes. If this parameter is not specified, the default value is **5**. If the value is set to **0**, health check is performed every 10 seconds.
health_period ic_audit_grace _period	No	Integer	Specifies the grace period for instance health check. The unit is second and the value ranges from **0** to **86400**. The default value is **600**. The health check grace period starts after an instance is added to an AS group and is enabled. The AS group will start checking the instance health only after the grace period ends. This parameter is valid only when the instance health check method of the AS group is **ELB_AUDIT**.
instance_term inate_policy	No	String	Specifies the instance removal policy. **OLD_CONFIG_OLD_INSTANCE** (default): The earlier-created instances based on the earlier-created AS configurations are removed first. **OLD_CONFIG_NEW_INSTANC E**: The later-created instances based on the earlier-created AS configurations are removed first. **OLD_INSTANCE**: The earlier-created instances are removed first. **NEW_INSTANCE**: The later-created instances are removed first.

Parameter	Mandatory	Type	Description
delete_publicip	No	Boolean	Specifies whether to delete the EIPs bound to ECS instances when the instances are removed from the AS group during scale-in actions. The value can be **true** or **false**. The default value is **false**. ● **true**: The EIPs bound to ECSs will be released when the ECSs are removed. If the EIPs are billed on a yearly/monthly basis, they will not be released when the ECSs are removed. ● **false**: The EIPs bound to ECSs will be unbound but will not be released when the ECSs are removed.
delete_volume	No	Boolean	Specifies whether to delete the data disks attached to ECS instances when the instances are removed from the AS group during scale-in actions. The value can be **true** or **false**. The default value is **false**. ● **true**: The data disks attached to ECSs will be released when the ECSs are removed. If the data disks are billed a yearly/monthly basis, they will not be deleted when ECSs are removed. ● **false**: The data disks attached to ECSs will be detached but will not be released when the ECSs are removed.

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Specifies the enterprise project ID, which is used to specify the enterprise project to which the AS group belongs. ● If the value is **0** or left blank, the AS group belongs to the default enterprise project. ● If the value is a UUID, the AS group belongs to the enterprise project corresponding to the UUID.. If an enterprise project is configured for an AS group, ECSs created in this AS group also belong to this enterprise project. Otherwise, the default enterprise project will be used.
multi_az_priority_policy	No	String	Specifies the priority policy used to select target AZs when adjusting the number of instances in an AS group. ● **EQUILIBRIUM_DISTRIBUTE** (default): When AS scales out the AS group, it preferentially distributes instances evenly across AZs in the **available_zones** list. If it fails in the target AZ, it selects another AZ based on the **PICK_FIRST** policy. ● **PICK_FIRST**: When AS scales out the AS group, the target AZ is determined in the order in the **available_zones** list.
description	No	String	Specifies the description of the AS group. The value can contain 1 to 256 characters.
iam_agency_name	No	String	Specifies the agency name, in 1 to 64 characters. ● **iam_agency_name** is not transferred if it is set to **null**. ● **iam_agency_name** is transferred if it is left blank or has a value.

Table 5-3 lbaas_listeners field description

Parameter	Mandatory	Type	Description
pool_id	Yes	String	Specifies the backend server group ID.
protocol_port	Yes	Integer	Specifies the port configured for the backend server group, which is the port on which a backend server listens for traffic. The port ranges from 1 to 65535.
weight	Yes	Integer	Specifies the weight, which determines the portion of requests a backend server processes. The value of this parameter ranges from **0** to **100**.
protocol_version	No	String	Specifies the version of instance IP addresses to be associated with the load balancer. The value can be **ipv4** or **ipv6**. **NOTE** ● Instances in an AS group do not support IPv4/IPv6 dual-stack on multiple NICs. IPv4/IPv6 dual-stack is only available for the first NIC that supports both IPv4 and IPv6. The NIC may be a primary NIC or an extension NIC. ● Only ECSs with flavors that support IPv6 can use IPv4/IPv6 dual-stack networks. If you want to select IPv6 for this parameter, make sure that you have selected such ECS flavors in a supported region. ● If you add two or more load balancers whose **pool_id**, **protocol_port**, and **protocol_version** settings are totally same, deduplication will be performed.

Table 5-4 networks field description

Parameter	Mandatory	Type	Description
id	Yes	String	Specifies the subnet ID.

Parameter	Mandatory	Type	Description
ipv6_enable	No	Boolean	Specifies whether to support IPv6 addresses. **true**: indicates that the NIC supports IPv6 addresses. **false**: indicates that the NIC does not support IPv6 addresses. The default value is **false**.
ipv6_bandwidth	No	**ipv6_bandwidth** object	Specifies the shared bandwidth of an IPv6 address. This parameter is left blank by default, indicating that no shared IPv6 bandwidth is bound.
allowed_address_pairs	No	Array of **allowed_address_pairs** objects	Specifies whether to allow the system to check the source and destination addresses.

Table 5-5 ipv6_bandwidth field description

Parameter	Mandatory	Type	Description
id	Yes	String	Specifies the ID of the shared bandwidth of an IPv6 address.

Table 5-6 allowed_address_pairs field description

Parameter	Mandatory	Type	Description
ip_address	No	String	Specifies whether to allow the system to check the source and destination addresses. This function is enabled by default. This parameter cannot be left empty. ● To disable this function, set the value to **1.1.1.1/0**. ● To enable this function, set a value other than 1.1.1.1/0.

Table 5-7 security_groups field description

Parameter	Mandatory	Type	Description
id	Yes	String	Specifies the security group ID.

Example Request

This example creates an AS group with the name **GroupNameTest**, the AS configuration ID **47683a91-93ee-462a-a7d7-484c006f4440**, the VPC ID **a8327883-6b07-4497-9c61-68d03ee193a**, the NIC ID **3cd35bca-5a10-416f-8994-f79169559870**, the maximum number of instances of **10**, the expected number of instances of **0**, the minimum number of instances of **0**, the health check method of **ECS** health check, and the multi-AZ scaling policy of **PICK_FIRST**.

```
{
    "scaling_group_name": "GroupNameTest",
    "scaling_configuration_id": "47683a91-93ee-462a-a7d7-484c006f4440",
    "desire_instance_number": 0,
    "min_instance_number": 0,
    "max_instance_number": 10,
    "health_periodic_audit_method": "NOVA_AUDIT",
    "vpc_id": "a8327883-6b07-4497-9c61-68d03ee193a",
    "available_zones": ["XXXa","XXXb"],
    "networks": [
        {
            "id": "3cd35bca-5a10-416f-8994-f79169559870"
        }
    ],
}
```

Response

Table 5-8 Response parameters

Parameter	Type	Description
scaling_group_id	String	Specifies the AS group ID.

Example Response

```
{
    "scaling_group_id": "a8327883-6b07-4497-9c61-68d03ee193a1"
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.1.2 Querying AS Groups

Function

This API is used to list AS groups based on search criteria. The results are displayed by page.

- Search criteria can be the AS group name, AS configuration ID, AS group status, start line number, and number of records.
- If no search criteria are specified, a maximum of 20 AS groups can be listed by default.

URI

GET /autoscaling-api/v1/{project_id}/scaling_group

📖 **NOTE**

You can type the question mark (?) and ampersand (&) at the end of the URI to define multiple search criteria. AS groups can be searched by all optional parameters in the following table. For details, see the example request.

Table 5-9 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_name	No	String	Specifies the AS group name. Fuzzy search is supported.
scaling_configuration_id	No	String	Specifies the AS configuration ID, which can be obtained using the API for listing AS configurations. For details, see **Querying AS Configurations**.
scaling_group_status	No	String	Specifies the AS group status. The options are as follows: ● **INSERVICE**: indicates that the AS group is functional. ● **PAUSED**: indicates that the AS group is paused. ● **ERROR**: indicates that the AS group malfunctions. ● **DELETING**: indicates that the AS group is being deleted.
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum value is **0**, and there is no limit on the maximum value.
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value ranges from 0 to 100.

Request

None

Example Request

This example queries AS groups with name **as-group-test** and AS configuration ID **1d281494-6085-4579-b817-c1f813be835f**.

GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group?scaling_group_name=as-group-test&scaling_configuration_id=1d281494-6085-4579-b817-c1f813be835f

Response

Table 5-10 Response parameters

Parameter	Type	Description
total_number	Integer	Specifies the total number of query records.
start_number	Integer	Specifies the start number of query records.
limit	Integer	Specifies the number of query records.
scaling_groups	Array of **scaling_groups** objects	Specifies the AS group list.

Table 5-11 scaling_groups field description

Parameter	Type	Description
scaling_group_name	String	Specifies the name of the AS group.
scaling_group_id	String	Specifies the AS group ID.
scaling_group_status	String	Specifies the AS group status.
scaling_configuration_id	String	Specifies the AS configuration ID.
scaling_configuration_name	String	Specifies the AS configuration name.
current_instance_number	Integer	Specifies the number of current instances in the AS group.
desire_instance_number	Integer	Specifies the expected number of instances in the AS group.
min_instance_number	Integer	Specifies the minimum number of instances in the AS group.
max_instance_number	Integer	Specifies the maximum number of instances in the AS group.
cool_down_time	Integer	Specifies the cooldown period (s).
lb_listener_id	String	Specifies the ID of a typical ELB listener. ELB listener IDs are separated using a comma (,).

Parameter	Type	Description
lbaas_listeners	Array of **lbaas_listeners** objects	Specifies enhanced load balancers. For details, see **Table 5-12**.
available_zones	Array of strings	Specifies the AZ information.
networks	Array of **networks** objects	Specifies the network information. For details, see **Table 5-13**.
security_groups	Array of **security_groups** objects	Specifies the security group information. For details, see **Table 5-16**.
create_time	String	Specifies the time when an AS group was created. The time format complies with UTC.
vpc_id	String	Specifies the ID of the VPC to which the AS group belongs.
detail	String	Specifies details about the AS group. If a scaling action fails, this parameter is used to record errors.
is_scaling	Boolean	Specifies the scaling flag of the AS group.
health_periodic_audit_method	String	Specifies the health check method.
health_periodic_audit_time	Integer	Specifies the health check interval.
health_periodic_audit_grace_period	Integer	Specifies the grace period for health check.
instance_terminate_policy	String	Specifies the instance removal policy.
delete_publicip	Boolean	Specifies whether to delete the EIP bound to the ECS when deleting the ECS.
delete_volume	Boolean	Specifies whether to delete the data disks attached to the ECS when deleting the ECS.
cloud_location_id	String	This parameter is reserved.
enterprise_project_id	String	Specifies the enterprise project ID.

Parameter	Type	Description
activity_type	String	Specifies the type of the AS action.
multi_az_priority_policy	String	Specifies the priority policy used to select target AZs when adjusting the number of instances in an AS group.
description	String	Specifies the description of the AS group.
iam_agency_name	String	Specifies the agency name.

Table 5-12 lbaas_listeners field description

Parameter	Type	Description
listener_id	String	Specifies the listener ID.
pool_id	String	Specifies the backend server group ID.
protocol_port	Integer	Specifies the backend protocol port, which is the port on which a backend ECS listens for traffic.
weight	Integer	Specifies the weight, which determines the portion of requests a backend ECS processes when being compared to other backend ECSs added to the same listener.
protocol_version	String	Specifies which version of IP addresses of backend servers will be bound with the load balancer. The value can be IPv4 or IPv6.

Table 5-13 networks field description

Parameter	Type	Description
id	String	Specifies the subnet ID.
ipv6_enable	Boolean	Specifies whether to support IPv6 addresses. If this parameter is set to **true**, the NIC supports IPv6 addresses. The default value is **false**.
ipv6_bandwidth	**ipv6_bandwidth** object	Specifies the shared bandwidth of an IPv6 address. This parameter is left blank by default, indicating that no IPv6 shared bandwidth is bound.

Parameter	Type	Description
allowed_address_pairs	Array of **allowed_address_pairs** objects	Specifies whether to allow the system to check the source and destination addresses.

Table 5-14 ipv6_bandwidth field description

Parameter	Type	Description
id	String	Specifies the ID of the shared bandwidth of an IPv6 address.

Table 5-15 allowed_address_pairs field description

Parameter	Type	Description
ip_address	String	Specifies whether to allow the system to check the source and destination addresses. This function is enabled by default. This parameter cannot be left empty. • To disable this function, set the value to **1.1.1.1/0**. • To enable this function, set a value other than 1.1.1.1/0.

Table 5-16 security_groups field description

Parameter	Type	Description
id	String	Specifies the security group ID.

Example Response

```
{
    "limit": 20,
    "scaling_groups": [
        {
            "networks": [
                {
```

```
                    "id": "a8327883-6b07-4497-9c61-68d03ee193a",
                    "ipv6_enable": true,
                    "ipv6_bandwidth":
                        {
                            "id": "076ee2ff-f23e-4338-b8ac-1bc7278532d5"
                        }
                }
            ],
            "available_zones": [
                "XXXa",
                "XXXb"
            ],
            "detail": null,
            "scaling_group_name": "as-group-test",
            "scaling_group_id": "77a7a397-7d2f-4e79-9da9-6a35e2709150",
            "scaling_group_status": "INSERVICE",
            "scaling_configuration_id": "1d281494-6085-4579-b817-c1f813be835f",
            "scaling_configuration_name": "healthCheck",
            "current_instance_number": 0,
            "desire_instance_number": 1,
            "min_instance_number": 0,
            "max_instance_number": 500,
            "cool_down_time": 300,
            "lb_listener_id": "",
            "security_groups": [
                {
                    "id": "8a4b1d5b-0054-419f-84b1-5c8a59ebc829"
                }
            ],
            "create_time": "2015-07-23T02:46:29Z",
            "vpc_id": "863ccae2-ee85-4d27-bc5b-3ba2a198a9e2",
            "health_periodic_audit_method": "ELB_AUDIT",
            "health_periodic_audit_time": 5,
            "health_periodic_audit_grace_period": 600,
            "instance_terminate_policy": "OLD_CONFIG_OLD_INSTANCE",
            "is_scaling": false,
            "delete_publicip": false,
            "multi_az_priority_policy": "PICK_FIRST"
        }
    ],
    "total_number": 1,
    "start_number": 0
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.

Returned Value	Description
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.1.3 Querying an AS Group

Function

This API is used to query details about a specified AS group by group ID.

URI

GET /autoscaling-api/v1/{project_id}/scaling_group/{scaling_group_id}

Table 5-17 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.

Request

None

Example Request

This example queries the details about the AS group with ID
d4e50321-3777-4135-97f8-9f5e9714a4b0.

```
GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group/
d4e50321-3777-4135-97f8-9f5e9714a4b0
```

Response

Table 5-18 Response parameters

Parameter	Type	Description
scaling_group	**scaling_groups** object	Specifies details about the AS group.

Table 5-19 scaling_groups field description

Parameter	Type	Description
scaling_group_name	String	Specifies the name of the AS group.
scaling_group_id	String	Specifies the AS group ID.
scaling_group_status	String	Specifies the AS group status.
scaling_configuration_id	String	Specifies the AS configuration ID.
scaling_configuration_name	String	Specifies the AS configuration name.
current_instance_number	Integer	Specifies the number of current instances in the AS group.
desire_instance_number	Integer	Specifies the expected number of instances in the AS group.
min_instance_number	Integer	Specifies the minimum number of instances in the AS group.
max_instance_number	Integer	Specifies the maximum number of instances in the AS group.
cool_down_time	Integer	Specifies the cooldown period (s).
lb_listener_id	String	Specifies the ID of a typical ELB listener. ELB listener IDs are separated using a comma (,).

Parameter	Type	Description
lbaas_listeners	Array of **lbaas_listeners** objects	Specifies enhanced load balancers. For details, see **Table 5-12**.
available_zones	Array of strings	Specifies the AZ information.
networks	Array of **networks** objects	Specifies the network information. For details, see **Table 5-13**.
security_groups	Array of **security_groups** objects	Specifies the security group information. For details, see **Table 5-16**.
create_time	String	Specifies the time when an AS group was created. The time format complies with UTC.
vpc_id	String	Specifies the ID of the VPC to which the AS group belongs.
detail	String	Specifies details about the AS group. If a scaling action fails, this parameter is used to record errors.
is_scaling	Boolean	Specifies the scaling flag of the AS group.
health_periodic_audit_method	String	Specifies the health check method.
health_periodic_audit_time	Integer	Specifies the health check interval.
health_periodic_audit_grace_period	Integer	Specifies the grace period for health check.
instance_terminate_policy	String	Specifies the instance removal policy.
delete_publicip	Boolean	Specifies whether to delete the EIP bound to the ECS when deleting the ECS.
delete_volume	Boolean	Specifies whether to delete the data disks attached to the ECS when deleting the ECS.
cloud_location_id	String	This parameter is reserved.
enterprise_project_id	String	Specifies the enterprise project ID.

Parameter	Type	Description
activity_type	String	Specifies the type of the AS action.
multi_az_priority_policy	String	Specifies the priority policy used to select target AZs when adjusting the number of instances in an AS group.
description	String	Specifies the description of the AS group.
iam_agency_name	String	Specifies the agency name.

Table 5-20 networks field description

Parameter	Type	Description
id	String	Specifies the subnet ID.
ipv6_enable	Boolean	Specifies whether to support IPv6 addresses. If this parameter is set to **true**, the NIC supports IPv6 addresses. The default value is **false**.
ipv6_bandwidth	**ipv6_bandwidth** object	Specifies the shared bandwidth of an IPv6 address. This parameter is left blank by default, indicating that no IPv6 shared bandwidth is bound.
allowed_address_pairs	Array of **allowed_address_pairs** objects	Specifies whether to allow the system to check the source and destination addresses.

Example Response

```
{
    "scaling_group": {
     "networks": [
            {
                "id": " a8327883-6b07-4497-9c61-68d03ee193a ",
                "ipv6_enable": true,
                "ipv6_bandwidth":
                    {
                        "id": "076ee2ff-f23e-4338-b8ac-1bc7278532d5"
                    }
            }
        ],
        "available_zones": [
            "XXXa",
            "XXXb"
        ],
        "detail": null,
```

```
        "scaling_group_name": "api_gateway_modify",
        "scaling_group_id": "d4e50321-3777-4135-97f8-9f5e9714a4b0",
        "scaling_group_status": "INSERVICE",
        "scaling_configuration_id": "53579851-3841-418d-a97b-9cecdb663a90",
        "scaling_configuration_name": "press",
        "current_instance_number": 7,
        "desire_instance_number": 8,
        "min_instance_number": 0,
        "max_instance_number": 100,
        "cool_down_time": 900,
        "lb_listener_id": null,
        "security_groups": [
            {
                "id": "23b7b999-0a30-4b48-ae8f-ee201a88a6ab"
            }
        ],
        "create_time": "2015-09-01T08:36:10Z",
        "vpc_id": "3e22f934-800d-4bb4-a588-0b9a76108190",
        "health_periodic_audit_method": "NOVA_AUDIT",
        "health_periodic_audit_time": 5,
        "health_periodic_audit_grace_period": 600,
        "instance_terminate_policy": "OLD_CONFIG_OLD_INSTANCE",
        "is_scaling": true,
        "delete_publicip": false,

        "activity_type":"MODIFY_ELB",
        "multi_az_priority_policy":"PICK_FIRST"
    }
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.

Returned Value	Description
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.1.4 Modifying an AS Group

Function

This API is used to modify a specified AS group.

- When the AS configuration of an AS group is changed, the existing instances created using the original AS configuration are not affected.

- If no scaling action is being performed, you can modify its subnet and AZ configurations.

- Changing the number of expected instances in an AS group will trigger a scaling action to add or remove instances to or from the AS group. The number of expected instances must be greater than or equal to the minimum number of instances and less than or equal to the maximum number of instances.

URI

PUT /autoscaling-api/v1/{project_id}/scaling_group/{scaling_group_id}

Table 5-21 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.

Request Parameters

Table 5-22 Request parameters

Parameter	Mandatory	Type	Description
scaling_group _name	No	String	Specifies the AS group name. It contains 1 to 64 characters. Only letters, digits, underscores (_), and hyphens (-) are allowed.
desire_instanc e_number	No	Integer	Specifies the expected number of instances. The value ranges from the minimum number of instances to the maximum number of instances.
min_instance_ number	No	Integer	Specifies the minimum number of instances.
max_instance_ number	No	Integer	Specifies the maximum number of instances, which is greater than or equal to the minimum number of instances.
cool_down_ti me	No	Integer	Specifies the cooldown period (in seconds). The value ranges from 0 to 86400 and is 300 by default.
available_zon es	No	Array of strings	Specifies the AZ information. The instances added in a scaling action will be created in a specified AZ. If you do not specify an AZ, the system automatically specifies one. You can change the AZ of an AS group only when no scaling action is being performed in the group.

Parameter	Mandatory	Type	Description
networks	No	Array of **networks** objects	Specifies network information. You can select up to five subnets. The first subnet you select is used by the primary NICs of ECSs by default. For the information about the data structure, see **Table 5-24**. The value of this parameter can be changed only when all the following conditions are met: ● No scaling actions are triggered in the AS group. ● The number of instances in the AS group is 0. ● The AS group is not in service.
security_groups	No	Array of **security_groups** objects	Specifies the security group information. A maximum of one security group can be selected. For information about the data structure, see **Table 5-26**. If a security group is specified both in the AS configuration and AS group, scaled ECS instances will be added to the security group specified in the AS configuration. If a security group is not specified in either of them, scaled ECS instances will be added to the default security group. For your convenience, you are advised to specify the security group in the AS configuration. The value of this parameter can be changed only when all the following conditions are met: ● No scaling actions are triggered in the AS group. ● The number of instances in the AS group is 0. ● The AS group is not in service.

Parameter	Mandatory	Type	Description
lb_listener_id	No	String	Specifies the ELB listener ID. You can add up to six load balancer listeners. Separate listener IDs with commas (,). The value of this parameter can be changed only when all the following conditions are met: ● No scaling actions are triggered in the AS group. ● The number of instances in the AS group is 0. ● The AS group is not in service.
lbaas_listeners	No	Array of **lbaas_list eners** objects	Specifies information about an ELB load balancer. You can add up to six load balancers. This parameter is in list data structure. For details, see **Table 5-23**.
health_periodic_audit_method	No	String	Specifies the health check method for instances in the AS group. The health check methods include **ELB_AUDIT** and **NOVA_AUDIT**. When load balancing is configured for an AS group, the default value is **ELB_AUDIT**. Otherwise, the default value is **NOVA_AUDIT**. ● **ELB_AUDIT**: indicates the ELB health check, which takes effect in an AS group with a listener. ● **NOVA_AUDIT**: indicates the ECS health check, which is the health check method delivered with AS.
health_periodic_audit_time	No	Integer	Specifies the health check period for the instances in the AS group. The value can be **1**, **5**, **15**, **60**, or **180** in the unit of minutes. If the value is set to **0**, health check is performed every 10 seconds.

Parameter	Mandatory	Type	Description
instance_term inate_policy	No	String	Specifies the instance removal policy. • **OLD_CONFIG_OLD_INSTANCE** (default): The earlier-created instances based on the earlier-created AS configurations are removed first. • **OLD_CONFIG_NEW_INSTANC E**: The later-created instances based on the earlier-created AS configurations are removed first. • **OLD_INSTANCE**: The earlier-created instances are removed first. • **NEW_INSTANCE**: The later-created instances are removed first.
health_periodi c_audit_grace _period	No	Integer	Specifies the grace period for instance health check. The unit is second and value range is 0-86400. The default value is **600**. The health check grace period starts after an instance is added to an AS group and is enabled. The AS group will start checking the instance status only after the grace period ends. This parameter is valid only when the instance health check method of the AS group is **ELB_AUDIT**.
scaling_config uration_id	No	String	Specifies the AS configuration ID, which can be obtained using the API for querying AS configurations. For details, see **Querying AS Configurations**.

Parameter	Mandatory	Type	Description
delete_publicip	No	Boolean	Specifies whether to delete the EIP bound to the ECS when deleting the ECS. If you do not want to delete the EIP, set this parameter to **false**. Then, the system only unbinds the EIP from the ECS and reserves the EIP. ● **true**: Delete the EIP bound to the ECS when deleting the ECS. If the EIP is billed on a yearly/monthly basis, it will not be deleted when the ECS is deleted. ● **false**: Only unbind the EIP bound to the ECS when deleting the ECS.
delete_volume	No	Boolean	Specifies whether to delete the data disks attached to the ECS when deleting the ECS. The value can be **true** or **false**. The default value is **false**. ● **true**: Delete the data disks attached to the ECS when deleting the ECS. If the data disks are billed a yearly/monthly basis, they will not be deleted when the ECS is deleted. ● **false**: Only detach the data disks attached to the ECS when deleting the ECS.

Parameter	Mandatory	Type	Description
enterprise_pro ject_id	No	String	Specifies the enterprise project ID, which is used to specify the enterprise project to which the AS group belongs. ● If the value is **0** or left blank, the AS group belongs to the default enterprise project. ● If the value is a UUID, the AS group belongs to the enterprise project corresponding to the UUID.. If an enterprise project is configured for an AS group, ECSs created in this AS group also belong to this enterprise project. Otherwise, the default enterprise project will be used.
multi_az_prior ity_policy	No	String	Specifies the priority policy used to select target AZs when adjusting the number of instances in an AS group. ● **EQUILIBRIUM_DISTRIBUTE** (default): When adjusting the number of instances, ensure that instances in each AZ in the **available_zones** list is evenly distributed. If instances cannot be added in the target AZ, select another AZ based on the **PICK_FIRST** policy. ● **PICK_FIRST**: When adjusting the number of instances, target AZs are determined in the order in the **available_zones** list.
description	No	String	Specifies the description of the AS group. The value can contain 1 to 256 characters.
iam_agency_n ame	No	String	Specifies the agency name, in 1 to 64 characters. ● If **iam_agency_name** is set to null, you do not need to modify it. ● If **iam_agency_name** is left blank or has a value, you need to modify it.

Table 5-23 lbaas_listeners field description

Parameter	Mandatory	Type	Description
pool_id	Yes	String	Specifies the backend server group ID. The value of this parameter can be changed only when all the following conditions are met: ● No scaling actions are triggered in the AS group. ● The number of instances in the AS group is 0. ● The AS group is not in service.
protocol_port	Yes	Integer	Specifies the backend protocol port, which is the port on which a backend ECS listens for traffic. The port ranges from 1 to 65535.
weight	Yes	Integer	Specifies the weight, which determines the portion of requests a backend ECS processes when being compared to other backend ECSs added to the same listener. The value of this parameter ranges from **0** to **100**.

Parameter	Mandatory	Type	Description
protocol_version	No	String	Specifies which version of IP addresses of backend servers will be bound with the load balancer. The value can be IPv4 or IPv6. **NOTE** ● Instances in an AS group do not support IPv4/IPv6 dual-stack on multiple NICs. IPv4/IPv6 dual-stack is only available for the first NIC that supports both IPv4 and IPv6. The NIC may be a primary NIC or an extension NIC. ● Only ECSs with flavors that support IPv6 addresses can use IPv4/IPv6 dual-stack networks. If you want to select IPv6 for this parameter, make sure that you have selected such ECS flavors in a supported region. ● If you add two or more load balancers whose **pool_id**, **protocol_port**, and **protocol_version** settings are totally same, deduplication will be performed.

Table 5-24 networks field description

Parameter	Mandatory	Type	Description
id	Yes	String	Specifies the subnet ID.
ipv6_enable	No	Boolean	Specifies whether to support IPv6 addresses. **true**: indicates that the NIC supports IPv6 addresses. **false**: indicates that the NIC does not support IPv6 addresses. The default value is **false**.
ipv6_bandwidth	No	**ipv6_bandwidth** object	Specifies the shared bandwidth of an IPv6 address. This parameter is left blank by default, indicating that no shared IPv6 bandwidth is bound.
allowed_address_pairs	No	Array of **allowed_address_pairs** objects	Specifies whether to allow the system to check the source and destination addresses.

Table 5-25 ipv6_bandwidth field description

Parameter	Mandatory	Type	Description
id	Yes	String	Specifies the ID of the shared bandwidth of an IPv6 address.

Table 5-26 security_groups field description

Parameter	Mandatory	Type	Description
id	Yes	String	Specifies the ID of the security group.

Example Request

This example changes the name, AS configuration, expected number of instances, minimum number of instances, maximum number of instances, and cooldown period of the AS group with ID **a8327883-6b07-4497-9c61-68d03ee193a1**.

```
PUT https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group/
a8327883-6b07-4497-9c61-68d03ee193a1

{
    "scaling_group_name": "group_1",
    "scaling_configuration_id": "f8327883-6a07-4497-9a61-68c03e8e72a2",
    "desire_instance_number": 1,
    "min_instance_number": 1,
    "max_instance_number": 3,
    "cool_down_time": 200,
    "multi_az_priority_policy": "PICK_FIRST"

}
```

Response parameters

Table 5-27 Response parameters

Parameter	Type	Description
scaling_group_id	String	Specifies the AS group ID.

Example Response

```
{
    "scaling_group_id": "a8327883-6b07-4497-9c61-68d03ee193a1"
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.1.5 Deleting an AS Group

Function

This interface is used to delete a specified AS group.

- **force_delete** specifies whether to forcibly delete an AS group, remove the ECS instances and release them when the AS group is running instances or performing scaling actions. By default, its value is **no**, which means not to forcibly delete the AS group.

- If the value of **force_delete** is set to **no**, the AS group can be deleted only when both the following conditions are met:
  - The AS group is performing no scaling action.
  - The number of running ECS instances (**current_instance_number**) is **0**.
- If the value of **force_delete** is set to **yes**, the AS group enters the **DELETING** state, rejecting new requests for scaling actions while completing the existing scaling actions. Then, all ECS instances are removed from the AS group and the AS group is deleted. Note that the manually added ECS instances will be removed from the AS group and the ECS instances automatically created by AS will be automatically deleted.

⚠ **CAUTION**

Forcibly deleting an AS group may not delete ECS instances in the group.

URI

DELETE /autoscaling-api/v1/{project_id}/scaling_group/{scaling_group_id}

Table 5-28 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.
force_delete	No	String	Specifies whether to forcibly delete an AS group. Options: • **no** (default): indicates that the AS group is not forcibly deleted. • **yes**: indicates to forcibly delete an AS group.

Request

None

Example Request

This example deletes the AS group with ID **a8327883-6b07-4497-9c61-68d03ee193a1**.

```
DELETE https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group/
a8327883-6b07-4497-9c61-68d03ee193a1?force_delete=yes
```

Response

None

Example Response

None

Returned Values

- Normal

  204

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.1.6 Enabling or Disabling an AS Group

Function

This interface is used to enable or disable a specified AS group.

📖 **NOTE**

For a disabled AS group, AS does not automatically trigger any scaling actions. When an AS group has an in-progress scaling action, the scaling action does not stop immediately after the AS group is disabled.

URI

POST /autoscaling-api/v1/{project_id}/scaling_group/{scaling_group_id}/action

Table 5-29 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.

Request

Table 5-30 Request parameters

Parameter	Mandatory	Type	Description
action	Yes	String	Specifies a flag for enabling or disabling an AS group. ● **resume**: enables the AS group. ● **pause**: disables the AS group.

Example Request

- This example enables the AS group with ID **a8327883-6b07-4497-9c61-68d03ee193a1**.
  ```
  POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group/
  a8327883-6b07-4497-9c61-68d03ee193a1/action

  {
      "action": "resume"
  }
  ```

- This example disables the AS group with ID **a8327883-6b07-4497-9c61-68d03ee193a1**.
  ```
  POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group/
  a8327883-6b07-4497-9c61-68d03ee193a1/action
  ```

```
{
    "action": "pause"
}
```

Response

None

Example Response

None

Returned Values

- Normal

  204

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.

Returned Value	Description
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.2 AS Configurations

5.2.1 Creating an AS Configuration

Function

This API is used to create an AS configuration.

- An AS configuration is a template specifying specifications for the instances to be added to an AS group.
- The AS configuration is decoupled from the AS group. An AS configuration can be used by multiple AS groups.
- Up to 100 AS configurations can be created for each user.

URI

POST /autoscaling-api/v1/{project_id}/scaling_configuration

Table 5-31 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.

Request

Table 5-32 Request parameters

Parameter	Mandatory	Type	Description
scaling_configuration_name	No	String	Specifies the AS configuration name. The name contains only letters, digits, underscores (_), and hyphens (-), and cannot exceed 64 characters.

Parameter	Mandatory	Type	Description
instance_config	No	Object	Specifies the ECS configuration. For details, see **Table 5-33**.
source_scaling_configuration_id	No	String	Specifies the ID of the source AS configuration, which will be used together with **instance_config** to create a new AS configuration. **NOTE** - If **instance_id** is specified in **instance_config**, **instance_id** is preferentially used to create the new AS configuration, and **source_scaling_configuration_id** does not take effect. - If **instance_id** is not specified in **instance_config**, **source_scaling_configuration_id** and **instance_config** are used together to create the new AS configuration. - If a parameter in **instance_config** is set to **null**, the corresponding setting of the source AS configuration takes effect. - If a parameter in **instance_config** is not set to **null** or left empty, this parameter overwrites the corresponding setting of the source AS configuration. - If **source_scaling_configuration_id** is not specified, **scaling_configuration_name** and **instance_config** are mandatory.

Table 5-33 instance_config field description

Parameter	Mandatory	Type	Description
instance_id	No	String	Specifies the ECS ID. When you want to create an AS configuration from an ECS, specify this parameter. In this case, the **flavorRef**, **imageRef**, **disk**, **security_groups**, **tenancy**, **dedicated_host_id**, and **instance_name** fields do not take effect. If the **instance_id** field is not specified, **flavorRef**, **imageRef**, and **disk** fields are mandatory.
flavorRef	No	String	Specifies the ECS flavor ID. A maximum of 10 flavors can be selected. Use a comma (,) to separate multiple flavor IDs. You can obtain an ECS flavor ID from the API for querying details about flavors and extended flavor information.
imageRef	No	String	Specifies the image ID. Its value is the same as that of **image_id** for specifying the image selected during ECS creation. You can obtain an image ID by calling the IMS API for querying images.
disk	No	Array of **disk** objects	Specifies the disk group information. System disks are mandatory and data disks are optional. For details, see **Table 5-34**.
key_name	No	String	Specifies the name of the SSH key pair used to log in to the ECS. **NOTE** If both **key_name** and **user_data** are specified, **user_data** only injects user data.
personality	No	Array of **personality** objects	Specifies information about the injected file. Only text files can be injected. A maximum of five files can be injected at a time and the maximum size of each file is 1 KB. For details, see **Table 5-36**.

Parameter	Mandatory	Type	Description
public_ip	No	**public_ip** object	Specifies the EIP of the ECS. The EIP can be configured in two ways. For details, see **Table 5-37**. ● Do not use an EIP. In this case, this parameter is unavailable. ● Automatically assign an EIP. You need to specify the information about the new EIP.

Parameter	Mandatory	Type	Description
user_data	No	String	Specifies the user data to be injected during the ECS creation process. Text, text files, and gzip files can be injected. Constraints: ● The content to be injected must be encoded with base64. The maximum size of the content to be injected (before encoding) is 32 KB. ● If **key_name** is not specified, the data injected by **user_data** is the password of user **root** for logging in to the ECS by default. ● This parameter is mandatory when you create a Linux ECS using the password authentication mode. Its value is the initial user **root** password. Password complexity requirements: ● Consists of 8 to 26 characters. ● Contains at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters !@$%^-_=+[{}]:,./? Examples: ● Use a plaintext password (risky in security), for example, **Cloud.1234**. `#! /bin/bash` `echo 'root:Cloud.1234'	chpasswd ;`  ● Use a ciphertext password (recommended) `#! /bin/bash` `echo 'root:6V6azyeLwcD3CHlpY$BN3VVq18fmCkj66B4zdHLWevqcxlig'	chpasswd -e` In the preceding command output, **6V6azyeLwcD3CHlpY$BN3VVq18fmCkj66B4zdHLWevqcxlig** is the ciphertext password, which can be generated as follows:

Parameter	Mandatory	Type	Description
			1. Generate an encrypted salt value. [root@test linux]# python -c "import crypt, getpass, pwd;print crypt.mksalt()" 6V6azyeLwcD3CHlpY 2. Generate a ciphertext password based on the salt value. [root@test linux]# python -c "import crypt, getpass, pwd;print crypt.crypt('Cloud.1234','\\$6\\$V6azyeLwcD3CHlpY')" 6V6azyeLwcD3CHlpY$BN3VVq18fmCkj66B4zdHLWevqcxlig Examples: - Linux #! /bin/bash echo user_test >> /home/user.txt - Windows rem cmd echo 111 > c:\aaa.txt **NOTE** Data injection is not supported for ECSs that use a Linux image and the password login mode.
metadata	No	**metadata** object	Specifies the ECS metadata. For details, see **Table 5-40**. **NOTE** - This parameter is mandatory when a Windows ECS with password authentication is created. - This field does not allow users to write data. It is mandatory when the ECS is to be created using a Windows image.
security_groups	No	Array of **security_groups** objects	Specifies security groups. For details, see **Table 5-41**. If a security group is specified both in the AS configuration and AS group, scaled ECS instances will be added to the security group specified in the AS configuration. If a security group is not specified in either of them, scaled ECS instances will be added to the default security group. For your convenience, you are advised to specify the security group in the AS configuration.

Parameter	Mandatory	Type	Description
server_group_id	No	String	Specifies the ECS group ID. For how to obtain an ECS group ID, see .
tenancy	No	String	Specifies that ECSs are created on DeHs. Options: • **dedicated**: Specifies that ECSs are created on DeHs. • This parameter is not specified.
dedicated_host _id	No	String	Specifies the ID of a DeH. **NOTE** • This parameter is valid only when **tenancy** is set to **dedicated**. • If this parameter is specified, ECSs will be created on a specified DeH. • If this parameter is not specified, the system automatically selects the DeH with the maximum available memory size from the DeHs that meet specifications requirements to create the ECSs, thereby balancing load of the DeHs.
multi_flavor_p riority_policy	No	String	Specifies the priority policy used when there are multiple flavors and instances to be created using an AS configuration. • **PICK_FIRST** (default): When an ECS is added for capacity expansion, the target flavor is determined in the order in the **flavorRef** list. • **COST_FIRST**: When an ECS is added for capacity expansion, the target flavor is determined for minimal expenses.
market_type	No	String	Specifies a billing mode for an ECS. The options are as follows: • **Pay-per-use**, which is not specified • **Spot pricing**

☐ **NOTE**

For a Linux ECS, its password can be injected only using **userdata**. For a Windows ECS, its password can be injected using **metadata** or **admin_pass** of **instance_metadata**.

Table 5-34 **disk** field description

Parameter	Mandatory	Type	Description
size	Yes	Integer	Specifies the disk size. The unit is GB. The system disk size ranges from 1 to 1024 and must be greater than or equal to the minimum size (**min_disk** value) of the system disk specified in the image. The data disk size ranges from 10 to 32768.

volume_type	Yes	String	Specifies the ECS system disk type. The disk type must match the available disk type.
			
			The value can be **SATA**, **SAS**, **GPSSD**, **SSD**, and **ESSD**.
			● **SSD**: the ultra-high I/O type
			● **SAS**: the high I/O type
			● **SATA**: the common I/O type
			● **GPSSD**: the general purpose SSD type
			● **ESSD**: the extreme SSD type
			
			If the specified disk type is not available in the AZ, the disk will fail to create.
			NOTE
			  Different ECS flavors support different disk types. The supported disk types will be displayed on the management console.
			NOTE
			  ● For details about disk types, see **Disk Types and Performance**.

disk_type	Yes	String	Specifies a disk type. The options are as follows:
			● **DATA**: indicates a data disk.
			● **SYS**: indicates a system disk.
			  NOTE
			    System disk encryption is not supported.

Parameter	Mandatory	Type	Description
dedicated_storage_id	No	String	Specifies a DSS device ID for creating an ECS disk. **NOTE** Specify DSS devices for all disks in an AS configuration or not. If DSS devices are specified, all the data stores must belong to the same AZ, and the disk types supported by a DSS device for a disk must be the same as the **volume_type** value.
data_disk_image_id	No	String	Specifies the ID of a data disk image used to export data disks of an ECS.
snapshot_id	No	String	Specifies the disk backup snapshot ID for restoring the system disk and data disks using a full-ECS backup when a full-ECS image is used. **NOTE** Each disk in an AS configuration must correspond to a disk backup in the full-ECS backup by **snapshot_id**.
metadata	No	**metadata object**	Specifies the metadata for creating disks. For details, see **Table 5-35**.
iops	No	Integer	Specifies the IOPS configured for an EVS disk. This parameter is mandatory only when **volume_type** is set to **GPSSD2** or **ESSD2**. **NOTE** ● For details about IOPS of GPSSD2 and ESSD2 EVS disks, see **Disk Types and Performance**. ● Only pay-per-use billing is supported currently.

Parameter	Mandatory	Type	Description
throughput	No	Integer	Specifies the throughput of an EVS disk. The unit is MiB/s. This parameter is mandatory when **volume_type** is set to **GPSSD2** and cannot be configured when **volume_type** is set to other values. **NOTE** ● For details about the throughput range of GPSSD2 EVS disks, see **Disk Types and Performance**. ● Only pay-per-use billing is supported currently.

Table 5-35 metadata Field Description for Creating Disks

Parameter	Mandatory	Type	Description
__system__encrypted	No	String	Specifies encryption in **metadata**. The value can be **0** (encryption disabled) or **1** (encryption enabled). If this parameter does not exist, the disk will not be encrypted by default. **NOTE** System disk encryption is not supported.
__system__cmkid	No	String	Specifies the CMK ID, which indicates encryption in **metadata**. This parameter is used with **__system__encrypted**. **NOTE** ● System disk encryption is not supported. ● For details about how to obtain the CMK ID, see **Querying the List of CMKs**.

Table 5-36 personality field description

Parameter	Mandatory	Type	Description
path	Yes	String	Specifies the path of the injected file. ● For Linux OSs, specify the path, for example, **/etc/ foo.txt**, for storing the injected file. ● For Windows, the injected file is automatically stored in the root directory of drive C. You only need to specify the file name, for example, **foo**. The file name contains only letters and digits.
content	Yes	String	Specifies the content of the injected file. The value must be the information after the content of the injected file is encoded using Base64.

Table 5-37 public_ip field description

Parameter	Mandatory	Type	Description
eip	Yes	**eip** object	Specifies the EIP automatically assigned to the ECS. For details, see **Table 5-38**.

Table 5-38 eip field description

Parameter	Mandatory	Type	Description
ip_type	Yes	String	Specifies the EIP type. Enumerated values of the IP address type: ● **5_bgp**: indicates the dynamic BGP. ● **5_sbgp**: indicates the static BGP.
bandwidth	Yes	**bandwidth** object	Specifies the bandwidth of an IP address. For details, see **Table 5-39**.

Table 5-39 bandwidth field description

Parameter	Mandatory	Type	Description
size	No	Integer	Specifies the bandwidth (Mbit/s). The value range for bandwidth billed by duration is 1 to 2000 and that for bandwidth billed by traffic is 1 to 300. **NOTE** ● If **share_type** is set to **PER**, this parameter is mandatory. If **share_type** is set to **WHOLE**, this parameter is invalid. ● The specific range may vary depending on the configuration in each region. You can see the bandwidth range of each region on the management console. ● The minimum unit for bandwidth varies depending on the bandwidth range. 　● The minimum unit is 1 Mbit/s by default if the allowed bandwidth size ranges from 0 to 300 Mbit/s. 　● The minimum unit is 50 Mbit/s by default if the allowed bandwidth ranges from 300 Mbit/s to 1,000 Mbit/s. 　● The minimum unit is 500 Mbit/s by default if the allowed bandwidth size is greater than 1000 Mbit/s.
share_type	Yes	String	Specifies the bandwidth sharing type. Enumerated values of the sharing type: ● **PER**: dedicated ● **WHOLE**: shared

Parameter	Mandatory	Type	Description
charging_mode	No	String	Specifies the bandwidth billing mode. The options are as follows: • **bandwidth**: billed by bandwidth. • **traffic**: billed by traffic. If the parameter value is out of the preceding options, creating the ECS will fail. **NOTE** • If **share_type** is set to **PER**, this parameter is mandatory. • If **share_type** is set to **WHOLE**, this parameter is invalid.
id	No	String	Specifies the bandwidth ID. When using a shared bandwidth, you can select an existing shared bandwidth to create an EIP. For details, see . **NOTE** • If **share_type** is set to **PER**, this parameter is invalid. • If **share_type** is set to **WHOLE**, this parameter is mandatory.

Table 5-40 metadata field description

Parameter	Mandat ory	Type	Description
admin_pass	No	String	Specifies the initial login password of the administrator account for logging in to an ECS using password authentication. The Linux administrator is **root**, and the Windows administrator is **Administrator**. Password complexity requirements: ● Consists of 8 to 26 characters. ● Contains at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters !@$%^-_=+[{}]:,./? ● The password cannot contain the username or the username in reversed order. ● The Windows ECS password cannot contain the username, the username in reversed order, or more than two consecutive characters in the username.

Table 5-41 security_groups field description

Parameter	Mandatory	Type	Description
id	Yes	String	Specifies the ID of the security group.

Example Request

This example creates an AS configuration with name **as-config-tlzp**, image ID **627a1223-2ca3-46a7-8d5f-7aef22c74ee6**, flavor ID **s3.xlarge.4**, **40 GB SATA** system disk, and SSH key name **100vm_key**.

```
POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_configuration

{
    "scaling_configuration_name": "as-config-tlzq",
    "instance_config": {
        "flavorRef": "s3.xlarge.4",
        "imageRef": "627a1223-2ca3-46a7-8d5f-7aef22c74ee6",
        "disk": [
            {
                "size": 40,
                "volume_type": "SATA",
                "disk_type": "SYS"
            }
        ],
        "key_name": "100vm_key" ,
        "security_groups": [{
```

```
        "id": "6c22a6c0-b5d2-4a84-ac56-51090dcc33be"
    }],
    "multi_flavor_priority_policy": "PICK_FIRST"
    }
}
```

Response

Table 5-42 Response parameters

Parameter	Type	Description
scaling_configuration_id	String	Specifies the AS configuration ID.

Example Response

```
{
    "scaling_configuration_id": "f8327883-6a07-4497-9a61-68c03e8e72a2"
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.

Returned Value	Description
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.2.2 Querying AS Configurations

Function

This API is used to query AS configurations based on search criteria. The results are displayed by page.

- Search criteria can be the AS configuration name, image ID, start line number, and number of records.
- If no search criteria are specified, a maximum of 20 AS configurations can be queried for a tenant by default.

URI

GET /autoscaling-api/v1/{project_id}/scaling_configuration

📖 NOTE

You can type the question mark (?) and ampersand (&) at the end of the URI to define multiple search criteria. AS configurations can be searched by all optional parameters in the following table. For details, see the example request.

Table 5-43 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_configuration_name	No	String	Specifies the AS configuration name. Supports fuzzy search.
image_id	No	String	Specifies the image ID. It is same as **imageRef**.

Parameter	Mandatory	Type	Description
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum parameter value is **0**.
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value range is 0 to 100.

Request

None

Example Request

This example queries the AS configurations with image ID **37ca2b35-6fc7-47ab-93c7-900324809c5c**.

```
GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_configuration?
image_id=37ca2b35-6fc7-47ab-93c7-900324809c5c
```

Response

Table 5-44 Response parameters

Parameter	Type	Description
total_number	Integer	Specifies the total number of query records.
start_number	Integer	Specifies the start line number.
limit	Integer	Specifies the number of query records.
scaling_config urations	Array of **scaling_ configur ations** objects	Specifies the AS configuration list.

Table 5-45 scaling_configurations field description

Parameter	Type	Description
scaling_config uration_id	String	Specifies the AS configuration ID. This parameter is globally unique.
tenant	String	Specifies the tenant ID.
scaling_config uration_name	String	Specifies the AS configuration name. Supports fuzzy search.

Parameter	Type	Description
instance_config	**instance_config** object	Specifies the information about instance configurations.
create_time	String	Specifies the time when AS configurations are created. The time format complies with UTC.
scaling_group_id	String	Specifies the ID of the AS group to which the AS configuration is bound.

Table 5-46 instance_config field description

Parameter	Type	Description
flavorRef	String	Specifies the ECS flavor ID.
imageRef	String	Specifies the image ID. It is same as **image_id**.
disk	Array of **disk** objects	Specifies the disk group information.
key_name	String	Specifies the name of the SSH key pair used to log in to the ECS.
key_fingerprint	String	Specifies the fingerprint of the SSH key pair used to log in to the ECS.
instance_name	String	This parameter is reserved. **NOTE** When you call APIs to query the details about an AS configuration created from an ECS or to list such AS configurations, **instance_name** is empty in the response.
instance_id	String	This parameter is reserved.
adminPass	String	This parameter is reserved.
personality	Array of **personality** objects	Specifies information about the injected file.
public_ip	**public_ip** object	Specifies the EIP of the ECS.
user_data	String	Specifies the Cloud-Init user data, which is encoded using Base64.
metadata	**metadata** object	Specifies the ECS metadata. For details, see **Table 5-53**.

Parameter	Type	Description
security_groups	Array of **security_groups** objects	Specifies the security group information.
server_group_id	String	Specifies the ECS group ID.
tenancy	String	Specifies that ECSs are created on DeHs.
dedicated_host_id	String	Specifies the ID of a DeH.
market_type	String	Specifies a billing mode for an ECS, which can be spot pricing or pay-per-use.
multi_flavor_priority_policy	String	Specifies the priority policy used when there are multiple flavors and instances to be created using an AS configuration.

Table 5-47 disk field description

Parameter	Type	Description
size	Integer	Specifies the disk size. The unit is GB.
volume_type	String	Specifies the disk type.
disk_type	String	Specifies whether the disk is a system disk or a data disk. **DATA** indicates a data disk. **SYS** indicates a system disk.
dedicated_storage_id	String	Specifies the ID of the DSS device for the disk.
data_disk_image_id	String	Specifies the ID of the data disk image for creating a data disk.
snapshot_id	String	Specifies the disk backup snapshot ID.
metadata	**metadata** object	Specifies the metadata for creating disks. For details, see **Table 5-48**.
iops	Integer	Specifies the IOPS of an EVS disk. This parameter is available when **volume_type** is set to **GPSSD2** or **ESSD2**. **NOTE** ● For details about IOPS of GPSSD2 and ESSD2 EVS disks, see **Disk Types and Performance**. ● Only pay-per-use billing is supported currently.

Parameter	Type	Description
throughput	Integer	Specifies the throughput of an EVS disk. The unit is MiB/s. This parameter is available when **volume_type** is set to **GPSSD2**. **NOTE** • For details about the throughput range of GPSSD2 EVS disks, see **Disk Types and Performance**. • Only pay-per-use billing is supported currently.

Table 5-48 metadata Field Description for Creating Disks

Parameter	Type	Description
__system__encrypted	String	Specifies encryption in **metadata**. The value can be **0** (encryption disabled) or **1** (encryption enabled). If this parameter does not exist, the disk will not be encrypted by default.
__system__cmkid	String	Specifies the CMK ID, which indicates encryption in **metadata**. This parameter is used with **__system__encrypted**. **NOTE** For details about how to obtain the CMK ID, see **Querying the List of CMKs**.

Table 5-49 personality field description

Parameter	Type	Description
path	String	Specifies the path of the injected file.
content	String	Specifies the content of the file to be injected. The file content is encoded using Base64.

Table 5-50 public_ip field description

Parameter	Type	Description
eip	**eip** object	Specifies the automatically assigned EIP.

Table 5-51 eip field description

Parameter	Type	Description
ip_type	String	Specifies the IP address type.
bandwidth	**bandwidth** object	Specifies the bandwidth of an IP address.

Table 5-52 bandwidth field description

Parameter	Type	Description
size	Integer	Specifies the bandwidth (Mbit/s).
share_type	String	Specifies the bandwidth sharing type. Enumerated values of the sharing type: ● **PER**: dedicated ● **WHOLE**: shared
charging_mode	String	Specifies the bandwidth billing mode. ● **traffic**: billed by traffic.
id	String	Specifies the bandwidth ID. You can specify a shared bandwidth when applying for an EIP with the bandwidth whose type is set to **WHOLE**.

Table 5-53 metadata field description

Parameter	Type	Description
admin_pass	String	Specifies the password of the **Administrator** account for a Windows ECS.

Table 5-54 security_groups field description

Parameter	Type	Description
id	String	Specifies the security group ID.

Example Response

```
{
    "limit": 20,
    "total_number": 2,
    "start_number": 0,
    "scaling_configurations": [
        {
            "tenant": "ce061903a53545dcaddb300093b477d2",
```

```
            "scaling_configuration_id": "6afe46f9-7d3d-4046-8748-3b2a1085ad86",
            "scaling_configuration_name": " config_name_1",
            "instance_config": {
              "disk": [
                {
                  "size": 40,
                  "volume_type": "SATA",
                  "disk_type": "SYS"
                },
                {
                  "size": 100,
                  "volume_type": "SATA",
                  "disk_type": "DATA"
                }
              ],
              "personality": null,
              "instance_name": null,
              "instance_id": null,
              "flavorRef": "103",
              "imageRef": "37ca2b35-6fc7-47ab-93c7-900324809c5c",
              "key_name": "keypair01",
              "key_fingerprint" : "SHA256:qlvdUkYgSjKUxcr2uJgJJRMCKMLkJO5BPLooBcgsF8k",
              "public_ip": null,
              "user_data": null,
              "metadata": {},
              "security_groups": [{
                  "id": "6c22a6c0-b5d2-4a84-ac56-51090dcc33be"
              }]
            },
            "create_time": "2015-07-23T01:04:07Z"
          },
          {
            "tenant": "ce061903a53545dcaddb300093b477d2",
            "scaling_configuration_id": "24a8c5f3-c713-4aba-ac29-c17101009e5d",
            "scaling_configuration_name": "config_name_2",
            "instance_config": {
              "disk": [
                {
                  "size": 40,
                  "volume_type": "SATA",
                  "disk_type": "SYS"
                }
              ],
              "personality": null,
              "instance_name": null,
              "instance_id": null,
              "flavorRef": "103",
              "imageRef": "37ca2b35-6fc7-47ab-93c7-900324809c5c",
              "key_name": "keypair01",
              "key_fingerprint" : "SHA256:qlvdUkYgSjKUxcr2uJgJJRMCKMLkJO5BPLooBcgsF8k",
              "public_ip": null,
              "user_data": null,
              "metadata": {},
              "security_groups": [{
                  "id": "6c22a6c0-b5d2-4a84-ac56-51090dcc33be"
              }],
              "multi_flavor_priority_policy": "PICK_FIRST"
            },
            "create_time": "2015-07-22T01:08:41Z"
          }
        ]
      }
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.2.3 Querying an AS Configuration

Function

This interface is used to query details about an AS configuration by configuration ID.

URI

GET /autoscaling-api/v1/{project_id}/scaling_configuration/
{scaling_configuration_id}

Table 5-55 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_configuration_id	Yes	String	Specifies an AS configuration ID, which is unique globally. For details, see **Querying an AS Configuration**.

Request

None

Example Request

This example queries the details about the AS configuration with ID
6afe46f9-7d3d-4046-8748-3b2a1085ad86.

```
GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_configuration/
6afe46f9-7d3d-4046-8748-3b2a1085ad86
```

Response

- Response parameters

Table 5-56 Response parameters

Parameter	Type	Description
scaling_configuration	**scaling_configurations** object	Provides AS configuration details.

Table 5-57 scaling_configurations field description

Parameter	Type	Description
scaling_configuration_id	String	Specifies the AS configuration ID. This parameter is globally unique.
tenant	String	Specifies the tenant ID.
scaling_configuration_name	String	Specifies the AS configuration name. Supports fuzzy search.

Parameter	Type	Description
instance_config	**instance_config** object	Specifies the information about instance configurations.
create_time	String	Specifies the time when AS configurations are created. The time format complies with UTC.
scaling_group_id	String	Specifies the ID of the AS group to which the AS configuration is bound.

Table 5-58 instance_config field description

Parameter	Type	Description
flavorRef	String	Specifies the ECS flavor ID.
imageRef	String	Specifies the image ID. It is same as **image_id**.
disk	Array of **disk** objects	Specifies the disk group information.
key_name	String	Specifies the name of the SSH key pair used to log in to the ECS.
key_fingerprint	String	Specifies the fingerprint of the SSH key pair used to log in to the ECS.
instance_name	String	This parameter is reserved. **NOTE** When you call APIs to query the details about an AS configuration created from an ECS or to list such AS configurations, **instance_name** is empty in the response.
instance_id	String	This parameter is reserved.
adminPass	String	This parameter is reserved.
personality	Array of **personality** objects	Specifies information about the injected file.
public_ip	**public_ip** object	Specifies the EIP of the ECS.
user_data	String	Specifies the Cloud-Init user data, which is encoded using Base64.
metadata	**metadata** object	Specifies the ECS metadata. For details, see **Table 5-53**.

Parameter	Type	Description
security_groups	Array of **security_groups** objects	Specifies the security group information.
server_group_id	String	Specifies the ECS group ID.
tenancy	String	Specifies that ECSs are created on DeHs.
dedicated_host_id	String	Specifies the ID of a DeH.
market_type	String	Specifies a billing mode for an ECS, which can be spot pricing or pay-per-use.
multi_flavor_priority_policy	String	Specifies the priority policy used when there are multiple flavors and instances to be created using an AS configuration.

Table 5-59 disk field description

Parameter	Type	Description
size	Integer	Specifies the disk size. The unit is GB.
volume_type	String	Specifies the disk type.
disk_type	String	Specifies whether the disk is a system disk or a data disk. **DATA** indicates a data disk. **SYS** indicates a system disk.
dedicated_storage_id	String	Specifies the ID of the DSS device for the disk.
data_disk_image_id	String	Specifies the ID of the data disk image for creating a data disk.
snapshot_id	String	Specifies the disk backup snapshot ID.
metadata	**metadata** object	Specifies the metadata for creating disks. For details, see **Table 5-48**.
iops	Integer	Specifies the IOPS of an EVS disk. This parameter is available when **volume_type** is set to **GPSSD2** or **ESSD2**. **NOTE** ● For details about IOPS of GPSSD2 and ESSD2 EVS disks, see **Disk Types and Performance**. ● Only pay-per-use billing is supported currently.

Parameter	Type	Description
throughput	Integer	Specifies the throughput of an EVS disk. The unit is MiB/s. This parameter is available when **volume_type** is set to **GPSSD2**. NOTE ● For details about the throughput range of GPSSD2 EVS disks, see **Disk Types and Performance**. ● Only pay-per-use billing is supported currently.

Table 5-60 personality field description

Parameter	Type	Description
path	String	Specifies the path of the injected file.
content	String	Specifies the content of the file to be injected. The file content is encoded using Base64.

Table 5-61 public_ip field description

Parameter	Type	Description
eip	**eip** object	Specifies the automatically assigned EIP.

Table 5-62 eip field description

Parameter	Type	Description
ip_type	String	Specifies the IP address type.
bandwidth	**bandwidth** object	Specifies the bandwidth of an IP address.

Table 5-63 bandwidth field description

Parameter	Type	Description
size	Integer	Specifies the bandwidth (Mbit/s).
share_type	String	Specifies the bandwidth sharing type. Enumerated values of the sharing type: ● **PER**: dedicated ● **WHOLE**: shared

Parameter	Type	Description
charging_mode	String	Specifies the bandwidth billing mode. • **traffic**: billed by traffic.
id	String	Specifies the bandwidth ID. You can specify a shared bandwidth when applying for an EIP with the bandwidth whose type is set to **WHOLE**.

Table 5-64 metadata field description

Parameter	Type	Description
admin_pass	String	Specifies the password of the **Administrator** account for a Windows ECS.

Table 5-65 security_groups field description

Parameter	Type	Description
id	String	Specifies the security group ID.

Example Response

```
{
    "scaling_configuration": {
        "tenant": "ce061903a53545dcaddb300093b477d2",
        "scaling_configuration_id": "6afe46f9-7d3d-4046-8748-3b2a1085ad86",
        "scaling_configuration_name": " config_name_1",
        "instance_config": {
            "disk": [
                {
                    "size": 40,
                    "volume_type": "SATA",
                    "disk_type": "SYS"
                },
                {
                    "size": 100,
                    "volume_type": "SATA",
                    "disk_type": "DATA"
                }
            ],
            "adminPass": "***",
            "personality": null,
            "instance_name": null,
            "instance_id": null,
            "flavorRef": "103",
            "imageRef": "37ca2b35-6fc7-47ab-93c7-900324809c5c",
            "key_name": "keypair01",
            "key_fingerprint" : "SHA256:qlvdUkYgSjKUxcr2uJgJJRMCKMLkJO5BPLooBcgsF8k",
            "public_ip": null,
            "user_data": null,
            "metadata": {},
            "security_groups": [{
                "id": "6c22a6c0-b5d2-4a84-ac56-51090dcc33be"
```

```
        }],
        "multi_flavor_priority_policy": "PICK_FIRST"
      },
      "create_time": "2015-07-23T01:04:07Z"
    }
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.2.4 Deleting an AS Configuration

Function

This interface is used to delete a specified AS configuration.

📖 NOTE

AS configurations used by AS groups cannot be deleted.

URI

DELETE /autoscaling-api/v1/{project_id}/scaling_configuration/
{scaling_configuration_id}

Table 5-66 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_ configuration _id	Yes	String	Specifies the AS configuration ID. For details, see **Querying AS Configurations**.

Request

None

Example Request

This example deletes the AS configuration with ID **6afe46f9-7d3d-4046-8748-3b2a1085ad86**.

```
DELETE https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_configuration/
6afe46f9-7d3d-4046-8748-3b2a1085ad86
```

Response

None

Example Response

None

Returned Values

- Normal

  204
- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.2.5 Batch Deleting AS Configurations

Function

This interface is used to batch delete AS configurations.

- AS configurations used by AS groups cannot be deleted.
- A maximum of 50 AS configurations can be deleted at a time.

URI

POST /autoscaling-api/v1/{project_id}/scaling_configurations

Table 5-67 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.

Request

Table 5-68 Request parameters

Parameter	Mandatory	Type	Description
scaling_configuration_id	Yes	Array of strings	Specifies the AS configuration ID. For details, see **Querying AS Configurations**.

Example Request

This example deletes the AS configurations with IDs **config1** and **config2** in a batch.
POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_configurations

```
{
   "scaling_configuration_id": [
      "config1",
      "config2"
   ]
}
```

Response

None

Example Response

None

Returned Values

- Normal

  204

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.

Returned Value	Description
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.3 Instances

5.3.1 Querying Instances in an AS Group

Function

This API is used to query instances in an AS group based on search criteria. The results are displayed by page.

- Search criteria can be the instance lifecycle status, instance health status, instance protection status, start line number, and number of records in the AS group.
- If no search criteria are specified, a maximum of 20 instances in an AS group can be queried by default.

URI

GET /autoscaling-api/v1/{project_id}/scaling_group_instance/{scaling_group_id}/list

📖 NOTE

You can type the question mark (?) and ampersand (&) at the end of the URI to define multiple search criteria. Instances in an AS group can be searched by all optional parameters in the following table. For details, see the example request.

Table 5-69 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.
life_cycle_state	No	String	Specifies the instance lifecycle status in the AS group. • **INSERVICE**: The instance is enabled. • **PENDING**: The instance is being added to the AS group. • **PENDING_WAIT**: The instance is waiting to be added to the AS group. • **REMOVING**: The instance is being removed from the AS group. • **REMOVING_WAIT**: The instance is waiting to be removed from the AS group. • **STANDBY**: The instance is in standby state. • **ENTERING_STANDBY**: The instance is entering the standby state.

Parameter	Mandatory	Type	Description
health_status	No	String	Specifies the instance health status. • **INITIALIZING**: The instance is initializing. • **NORMAL**: The instance is normal. • **ERROR**: The instance is abnormal.
protect_from_scaling_down	No	String	Specifies the instance protection status. • **true**: Instance protection is enabled. • **false**: Instance protection is disabled.
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum parameter value is **0**.
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value ranges from 0 to 100.

Request

None

Example Request

This example queries enabled, healthy instances in the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group_instance/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/list?life_cycle_state=INSERVICE&health_status=NORMAL

Response

Table 5-70 Response parameters

Parameter	Type	Description
total_number	Integer	Specifies the total number of query records.

Parameter	Type	Description
start_number	Integer	Specifies the start line number.
limit	Integer	Specifies the maximum number of resources to be queried.
scaling_group_instances	Array of **scaling_group_instances** objects	Specifies details about the instances in the AS group.

Table 5-71 scaling_group_instances field description

Parameter	Type	Description
instance_id	String	Specifies the instance ID.
instance_name	String	Specifies the instance name.
scaling_group_id	String	Specifies the ID of the AS group to which the instance belongs.
scaling_group_name	String	Specifies the name of the AS group to which the instance belongs. Supports fuzzy search.

Parameter	Type	Description
life_cycle_state	String	Specifies the instance lifecycle status in the AS group. ● **INSERVICE**: The instance is enabled. ● **PENDING**: The instance is being added to the AS group. ● **PENDING_WAIT**: The instance is waiting to be added to the AS group. ● **REMOVING**: The instance is being removed from the AS group. ● **REMOVING_WAIT**: The instance is waiting to be removed from the AS group. ● **STANDBY**: The instance is in standby state. ● **ENTERING_STANDBY**: The instance is entering the standby state.
health_status	String	Specifies the instance health status. ● **INITIALIZING**: The instance is being initialized. ● **NORMAL**: The instance is functional. ● **ERROR**: The instance is faulty.
scaling_configuration_name	String	Specifies the AS configuration name.
scaling_configuration_id	String	Specifies the AS configuration ID. If the returned value is not empty, the instance is an ECS automatically created in a scaling action. If the returned value is empty, the instance is an ECS manually added to the AS group.
create_time	String	Specifies the time when the instance is added to the AS group. The time format complies with UTC.
protect_from_scaling_down	Boolean	Specifies the instance protection status.

Example Response

```
{
    "limit": 10,
    "total_number": 1,
    "start_number": 0,
    "scaling_group_instances": [
        {
            "instance_id": "b25c1589-c96c-465b-9fef-d06540d1945c",
            "scaling_group_id": "e5d27f5c-dd76-4a61-b4bc-a67c5686719a",
            "scaling_group_name": "discuz",
            "life_cycle_state": "INSERVICE",
            "health_status": "NORMAL",
            "scaling_configuration_name": "discuz",
```

```
        "scaling_configuration_id": "ca3dcd84-d197-4c4f-af2a-cf8ba39696ac",
        "create_time": "2015-07-23T06:47:33Z",
        "instance_name": "discuz_3D210808",
        "protect_from_scaling_down": false
      }
    ]
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.3.2 Removing an Instance from an AS Group

Function

This interface is used to remove a specified instance from an AS group.

- You can remove instances only in **INSERVICE** state and only when the number of instances after the removal is greater than or equal to the minimum number of instances allowed.

- You can remove instances from an AS group only when no scaling action is in progress.

☐ **NOTE**

Manually added instances are removed from an AS group but are not deleted.

URI

DELETE /autoscaling-api/v1/{project_id}/scaling_group_instance/{instance_id}

Table 5-72 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
instance_id	Yes	String	Specifies the instance ID. For details, see **Querying Instances in an AS Group**.
instance_delete	No	String	Specifies whether an instance is deleted when it is removed from the AS group. Options: • **no** (default): The instance will not be deleted. • **yes**: The instance will be deleted.

Request

None

Example Request

This example removes the instance with ID **b25c1589-c96c-465b-9fef-d06540d1945c** from the AS group but does not delete the instance.

```
DELETE https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group_instance/b25c1589-c96c-465b-9fef-d06540d1945c?instance_delete=no
```

Response

None

Example Response

None

Returned Values

- Normal

204

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.3.3 Batch Managing Instances

Function

- Add or remove instances to or from an AS group in batches.

  ◯ NOTE

    If the instances were manually added to an AS group, they are removed from the AS group but are not deleted.

- Configure instance protection or cancel the configuration for the instances in an AS group in batches.
- Set the standby mode or cancel the setting for the instances in an AS group in batches.

  ◯ NOTE

  - A batch removal operation can be performed on a maximum of 50 instances at a time. Other batch operations can be performed on a maximum of 10 instances at a time. After instances are added to an AS group, the number of instances in the AS group cannot be greater than the maximum number of instances. After instances are removed from an AS group, the number of instances in the AS group cannot be less than the minimum number of instances.
  - Instances can be added to an AS group only when the AS group is in the **INSERVICE** state and has no scaling action in progress.
  - You can remove instances from an AS group only when no scaling action is in progress.
  - To add instances to an AS group, ensure that the AZ of the instances falls within that of the AS group.
  - Only instances in **INSERVICE** state can be removed from an AS group. Instance protection can be enabled or disabled only for **INSERVICE** instances.
  - When the capacity of an AS group is automatically decreased, the instances with instance protection enabled will not be removed from the AS group.
  - If the listener bound to the instance to be removed is the same as the listener in the AS group, the listener will be unbound from the instance. If the listener bound to the instance to be removed is different from the listener in the AS group, the binding relationship between the listener and instance will be reserved.

URI

POST /autoscaling-api/v1/{project_id}/scaling_group_instance/{scaling_group_id}/action

Table 5-73 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.

Request

Table 5-74 Request parameters

Parameter	Mandatory	Type	Description
instances_id	Yes	Array of strings	Specifies the ECS ID.
instance_delete	No	String	Specifies whether to delete an instance when it is removed from an AS group. Options: ● **no** (default): The instance will not be deleted. ● **yes**: The instance will be deleted. If the instances were manually added to an AS group, they are removed from the AS group but are not deleted. This parameter takes effect only when the **action** is set to **REMOVE**.
instance_append d	No	String	Specifies whether to add new instances when certain existing instances enter standby mode. Options: ● **no** (default): No new instances will be added. ● **yes**: New instances will be added. This parameter takes effect only when **action** is set to **ENTER_STANDBY**.

Parameter	Mandatory	Type	Description
action	Yes	String	Specifies an action to be performed on instances in batches. The options are as follows: ● **ADD**: adds instances to the AS group. ● **REMOVE**: removes instances from the AS group. ● **PROTECT**: enables instance protection. ● **UNPROTECT**: disables instance protection. ● **ENTER_STANDBY**: sets instances to standby mode. ● **EXIT_STANDBY**: cancels standby mode for instances.

Example Request

● This example adds two instances with IDs **instance_id_1** and **instance_id_2** to the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a** in a batch.

```
POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group_instance/e5d27f5c-dd76-4a61-
b4bc-a67c5686719a/action

{
    "action": "ADD",
    "instances_id": [
        "instance_id_1",
        "instance_id_2"
    ]
}
```

● This example removes and deletes instances with IDs **instance_id_1** and **instance_id_2** from the AS group **e5d27f5c-dd76-4a61-b4bc-a67c5686719a** in a batch.

```
POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group_instance/e5d27f5c-dd76-4a61-
b4bc-a67c5686719a/action

{
    "action": "REMOVE",
    "instances_id": [
        "instance_id_1",
        "instance_id_2"
    ],
    "instance_delete": "yes"
}
```

● This example enables instance protection for instances with IDs **instance_id_1** and **instance_id_2** in a batch.

```
POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group_instance/e5d27f5c-dd76-4a61-
b4bc-a67c5686719a/action
```

```
{
    "action": "PROTECT",
    "instances_id": [
        "instance_id_1",
        "instance_id_2"
    ]
}
```

- This example disables instance protection for instances with IDs **instance_id_1** and **instance_id_2** in a batch.

POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group_instance/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/action

```
{
    "action": "UNPROTECT",
    "instances_id": [
        "instance_id_1",
        "instance_id_2"
    ]
}
```

- This example puts instances with IDs **instance_id_1** and **instance_id_2** into the standby status in a batch.

POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group_instance/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/action

```
{
    "action": "ENTER_STANDBY",
    "instances_id": [
        "instance_id_1",
        "instance_id_2"
    ],
    "instance_append": "yes"
}
```

- This example moves instances with IDs **instance_id_1** and **instance_id_2** out of the standby status in a batch.

POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group_instance/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/action

```
{
    "action": "EXIT_STANDBY",
    "instances_id": [
        "instance_id_1",
        "instance_id_2"
    ]
}
```

Response

None

Example Response

None

Returned Values

- Normal

204

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4 AS Policies

5.4.1 Creating an AS Policy

Function

This API is used to create an AS policy.

- An AS policy defines whether to increase or decrease the number of instances in an AS group. If the number and the expected number of instances in an AS group are different due to the execution of the AS policy, AS automatically adjusts the number of instances to the expected.

- AS supports the following policies: alarm-triggered policy, periodic policy, and scheduled policy.

- In the execution of the AS policy, you can set the number of instances to be scaled or perform a scaling action according to a percentage specified in the AS policy.

URI

POST /autoscaling-api/v1/{project_id}/scaling_policy

Table 5-75 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.

Request

Table 5-76 Request parameters

Parameter	Mandatory	Type	Description
scaling_policy_name	Yes	String	Specifies the AS policy name. The name contains only letters, digits, underscores (_), and hyphens (-), and cannot exceed 64 characters.
scaling_group_id	Yes	String	Specifies the AS group ID, which can be obtained using the API for querying AS groups. For details, see **Querying AS Groups**.
scaling_policy_type	Yes	String	Specifies the AS policy type. • **ALARM** (corresponding to **alarm_id**): indicates that the scaling action is triggered by an alarm. • **SCHEDULED** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered as scheduled. • **RECURRENCE** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered periodically.

Parameter	Mandatory	Type	Description
alarm_id	No	String	Specifies the alarm rule ID. This parameter is mandatory when **scaling_policy_type** is set to **ALARM**. After this parameter is specified, the value of **scheduled_policy** does not take effect. After you create an alarm policy, the system automatically adds an alarm triggering activity of the autoscaling type to the **alarm_actions** field in the alarm rule specified by the parameter value.
scheduled_polic y	No	**schedule d_policy** object	Specifies the periodic or scheduled AS policy. This parameter is mandatory when **scaling_policy_type** is set to **SCHEDULED** or **RECURRENCE**. After this parameter is specified, the value of **alarm_id** does not take effect. For details, see **Table 5-77**.
scaling_policy_a ction	No	**scaling_ policy_a ction** object	Specifies the scaling action of the AS policy. For details, see **Table 5-78**.
cool_down_tim e	No	Integer	Specifies the cooldown period (in seconds). The value ranges from 0 to 86400 and is 300 by default.

Table 5-77 **scheduled_policy** field description

Parameter	Mandatory	Type	Description
launch_time	Yes	String	Specifies the time when the scaling action is triggered. The time format complies with UTC. ● If **scaling_policy_type** is set to **SCHEDULED**, the time format is **YYYY-MM-DDThh:mmZ**. ● If **scaling_policy_type** is set to **RECURRENCE**, the time format is **hh:mm**.

Parameter	Mandatory	Type	Description
recurrence_type	No	String	Specifies the periodic triggering type. This parameter is mandatory when **scaling_policy_type** is set to **RECURRENCE**. ● **Daily**: indicates that the scaling action is triggered once a day. ● **Weekly**: indicates that the scaling action is triggered once a week. ● **Monthly**: indicates that the scaling action is triggered once a month.
recurrence_value	No	String	Specifies the day when a periodic scaling action is triggered. This parameter is mandatory when **scaling_policy_type** is set to **RECURRENCE**. ● If **recurrence_type** is set to **Daily**, the value is **null**, indicating that the scaling action is triggered once a day. ● If **recurrence_type** is set to **Weekly**, the value ranges from **1** (Sunday) to **7** (Saturday). The digits refer to dates in each week and separated by a comma, such as **1,3,5**. ● If **recurrence_type** is set to **Monthly**, the value ranges from **1** to **31**. The digits refer to the dates in each month and separated by a comma, such as **1,10,13,28**.
start_time	No	String	Specifies the start time of the scaling action triggered periodically. The time format complies with UTC. The default value is the local time. The time format is **YYYY-MM-DDThh:mmZ**.

Parameter	Mandatory	Type	Description
end_time	No	String	Specifies the end time of the scaling action triggered periodically. The time format complies with UTC. This parameter is mandatory when **scaling_policy_type** is set to **RECURRENCE**. When the scaling action is triggered periodically, the end time cannot be earlier than the current and start time. The time format is **YYYY-MM-DDThh:mmZ**.

Table 5-78 scaling_policy_action field description

Parameter	Mandatory	Type	Description
operation	No	String	Specifies the operation to be performed. The default operation is **ADD**. ● **ADD**: adds specified number of instances to the AS group. ● **REMOVE/REDUCE**: removes or reduces specified number of instances from the AS group. ● **SET**: sets the number of instances in the AS group.
instance_number	No	Integer	Specifies the number of instances to be operated. The default number is **1**. The value range is as follows for a default quota: ● If **operation** is set to **SET**, the value ranges from **0** to **300**. ● If **operation** is set to **ADD**, **REMOVE**, or **REDUCE**, the value ranges from **1** to **300**. NOTE Either **instance_number** or **instance_percentage** is required.

Parameter	Mandatory	Type	Description
instance_perce ntage	No	Integer	Specifies the percentage of instances to be operated. You can increase, decrease, or set the number of instances in an AS group to the specified percentage of the current number of instances. If **operation** is set to **ADD**, **REMOVE** or **REDUCE**, the value is an integer from 1 to 20000. If **operation** is set to **SET**, the value is an integer from 0 to 20000. If neither **instance_number** nor **instance_percentage** is specified, the number of instances to be operated is 1. Either **instance_number** or **instance_percentage** is required.

Example Request

This example creates a periodic AS policy named **as-policy-7a75**. The policy takes effect from **2015-12-14T03:34Z** to **2015-12-27T03:34Z**. During this period, one instance will be added to AS group with ID **5bc3aa02-b83e-454c-aba1-4d2095c68f8b** at 16:00 every day.

POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_policy

```
{
    "scaling_policy_name": "as-policy-7a75",
    "scaling_policy_action": {
        "operation": "ADD",
        "instance_number": 1
    },
    "cool_down_time": 900,
    "scheduled_policy": {
        "launch_time": "16:00",
        "recurrence_type": "Daily",
        "start_time": "2015-12-14T03:34Z",
        "end_time": "2015-12-27T03:34Z"
    },
    "scaling_policy_type": "RECURRENCE",
    "scaling_group_id": "5bc3aa02-b83e-454c-aba1-4d2095c68f8b"
}
```

Response

Table 5-79 Response parameters

Parameter	Type	Description
scaling_policy_id	String	Specifies the AS policy ID.

Example Response

```
{
    "scaling_policy_id": "0h327883-324n-4dzd-9c61-68d03ee191dd"
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.2 Creating an AS Policy (V2)

Function

This API is used to create an AS policy for an AS group or bandwidth.

The difference between the V2 and V1 APIs for creating an AS policy is that V2 supports creating an AS policy for adjusting bandwidth and differentiating scaling resources by their types.

URI

POST /autoscaling-api/v2/{project_id}/scaling_policy

Table 5-80 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.

Request

Table 5-81 Request parameters

Parameter	Mandatory	Type	Description
scaling_policy _name	Yes	String	Specifies the AS policy name. The name contains only letters, digits, underscores (_), and hyphens (-), and cannot exceed 64 characters.
scaling_resour ce_id	Yes	String	Specifies the scaling resource ID, which is the unique ID of an AS group or bandwidth. • If **scaling_resource_type** is set to **SCALING_GROUP**, this parameter indicates the unique AS group ID. • If **scaling_resource_type** is set to **BANDWIDTH**, this parameter indicates the unique bandwidth ID. **NOTE** AS cannot scale yearly/monthly bandwidths.
scaling_resour ce_type	Yes	String	Specifies the scaling resource type. • AS group: **SCALING_GROUP** • Bandwidth: **BANDWIDTH**

Parameter	Mandatory	Type	Description
scaling_policy _type	Yes	String	Specifies the AS policy type. • **ALARM** (corresponding to **alarm_id**): indicates that the scaling action is triggered by an alarm. • **SCHEDULED** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered as scheduled. • **RECURRENCE** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered periodically. • **INTERVAL_ALARM** (corresponding to **alarm_id**): indicates that the scaling action is triggered by a refined scaling policy.
alarm_id	No	String	Specifies the alarm rule ID. This parameter is mandatory when **scaling_policy_type** is set to **ALARM**. After this parameter is specified, the value of **scheduled_policy** does not take effect. After you create an alarm policy, the system automatically adds an alarm triggering activity of the autoscaling type to the **alarm_actions** field in the alarm rule specified by the parameter value. You can obtain the parameter value by querying Cloud Eye alarm rules.
scheduled_pol icy	No	**scheduled_policy** object	Specifies the periodic or scheduled AS policy. This parameter is mandatory when **scaling_policy_type** is set to **SCHEDULED** or **RECURRENCE**. After this parameter is specified, the value of **alarm_id** does not take effect. For details, see **Table 5-82**.

Parameter	Mandatory	Type	Description
scaling_policy _action	No	**scaling_p olicy_acti on** object	Specifies the scaling action of the AS policy. For details, see **Table 5-83**.
interval_alar m_actions	No	Array of **interval_ alarm_ac tions** objects	Specifies the value range of an alarm policy. This parameter is valid and mandatory when **scaling_policy_type** is set to **INTERVAL_ALARM**. For details, see **Table 5-84**.
cool_down_ti me	No	Integer	Specifies the cooldown period (in seconds). The value ranges from 0 to 86400 and is 300 by default.
description	No	String	Specifies the description of the AS policy. The value can contain 1 to 256 characters.

Table 5-82 **scheduled_policy** field description

Parameter	Mandatory	Type	Description
launch_time	Yes	String	Specifies the time when the scaling action is triggered. The time format complies with UTC. ● If **scaling_policy_type** is set to **SCHEDULED**, the time format is **YYYY-MM-DDThh:mmZ**. ● If **scaling_policy_type** is set to **RECURRENCE**, the time format is **hh:mm**.
recurrence_typ e	No	String	Specifies the periodic triggering type. This parameter is mandatory when **scaling_policy_type** is set to **RECURRENCE**. ● **Daily**: indicates that the scaling action is triggered once a day. ● **Weekly**: indicates that the scaling action is triggered once a week. ● **Monthly**: indicates that the scaling action is triggered once a month.

Parameter	Mandatory	Type	Description
recurrence_value	No	String	Specifies the day when a periodic scaling action is triggered. This parameter is mandatory when **scaling_policy_type** is set to **RECURRENCE**. ● If **recurrence_type** is set to **Daily**, the value is **null**, indicating that the scaling action is triggered once a day. ● If **recurrence_type** is set to **Weekly**, the value ranges from **1** (Sunday) to **7** (Saturday). The digits refer to dates in each week and separated by a comma, such as **1,3,5**. ● If **recurrence_type** is set to **Monthly**, the value ranges from **1** to **31**. The digits refer to the dates in each month and separated by a comma, such as **1,10,13,28**. **NOTE** When **recurrence_type** is set to **Daily**, this parameter does not take effect.
start_time	No	String	Specifies the start time of the scaling action triggered periodically. The time format complies with UTC. The default value is the local time. The time format is **YYYY-MM-DDThh:mmZ**.
end_time	No	String	Specifies the end time of the scaling action triggered periodically. The time format complies with UTC. This parameter is mandatory when **scaling_policy_type** is set to **RECURRENCE**. When the scaling action is triggered periodically, the end time cannot be earlier than the current and start time. The time format is **YYYY-MM-DDThh:mmZ**.

Table 5-83 scaling_policy_action field description

Parameter	Mandatory	Type	Description

operation	No	String	Specifies the operation to be performed. The default operation is **ADD**.
			
			● If **scaling_resource_type** is set to **SCALING_GROUP**, the following operations are supported:
			  – **ADD**: indicates adding instances.
			  – **REMOVE/REDUCE**: indicates removing or reducing instances.
			  – **SET**: indicates setting the number of instances to a specified value.
			
			● If **scaling_resource_type** is set to **BANDWIDTH**, the following operations are supported:
			  – **ADD**: indicates adding instances.
			  – **REDUCE**: indicates reducing instances.
			  – **SET**: indicates setting the number of instances to a specified value.

size	No	Integer	Specifies the operation size. The value is an integer from 0 to 300. The default value is **1**. This parameter can be set to **0** only when **operation** is set to **SET**. ● If **scaling_resource_type** is set to **SCALING_GROUP**, this parameter indicates the number of instances. The value is an integer from 0 to 300 and the default value is **1**. ● If **scaling_resource_type** is set to **BANDWIDTH**, this parameter indicates the bandwidth (Mbit/s). The value is an integer from 1 to 300 and the default value is **1**. ● If **scaling_resource_type** is set to **SCALING_GROUP**, either **size** or **percentage** can be set.

Parameter	Mandatory	Type	Description
percentage	No	Integer	Specifies the percentage of instances to be operated. If **operation** is set to **ADD**, **REMOVE**, or **REDUCE**, the value of this parameter is an integer from 1 to 20000. If **operation** is set to **SET**, the value is an integer from 0 to 20000. ● If **scaling_resource_type** is set to **SCALING_GROUP**, either **size** or **percentage** can be set. If neither **size** nor **percentage** is set, the default value of **size** is **1**. ● If **scaling_resource_type** is set to **BANDWIDTH**, **percentage** is unavailable.
limits	No	Integer	Specifies the operation restrictions. If **scaling_resource_type** is set to **BANDWIDTH** and **operation** is not **SET**, this parameter takes effect and the unit is Mbit/s. ● If **operation** is set to **ADD**, this parameter indicates the maximum bandwidth allowed. ● If **operation** is set to **REDUCE**, this parameter indicates the minimum bandwidth allowed.

Table 5-84 interval_alarm_actions field description

Parameter	Mandatory	Type	Description
lower_bound	No	double	Specifies the lower limit of the value range. The value is null by default. If the lower limit of the value range is null, the upper limit must be less than or equal to 0. The minimum lower limit allowed is **-1.174271E108**.

Parameter	Mandatory	Type	Description
upper_bound	No	double	Specifies the upper limit of the value range. The value is null by default. If the upper limit of the range is null, the lower limit must be greater than or equal to 0. The maximum upper limit allowed is **1.174271E108**.

operation	No	String	Specifies the operation to be performed. The default operation is **ADD**.
			
			● If **scaling_resource_type** is set to **SCALING_GROUP**, the following operations are supported:
			  – **ADD**: indicates adding instances.
			  – **REMOVE/REDUCE**: indicates removing or reducing instances.
			  – **SET**: indicates setting the number of instances to a specified value.
			
			● If **scaling_resource_type** is set to **BANDWIDTH**, the following operations are supported:
			  – **ADD**: indicates adding instances.
			  – **REDUCE**: indicates reducing instances.
			  – **SET**: indicates setting the number of instances to a specified value.

size	No	Integer	Specifies the operation size. The value is an integer from 0 to 300. The default value is **1**. This parameter can be set to **0** only when **operation** is set to **SET**. ● If **scaling_resource_type** is set to **SCALING_GROUP**, this parameter indicates the number of instances. The value is an integer from 0 to 300 and the default value is **1**. ● If **scaling_resource_type** is set to **BANDWIDTH**, this parameter indicates the bandwidth (Mbit/s). The value is an integer from 1 to 300 and the default value is **1**. ● If **scaling_resource_type** is set to **SCALING_GROUP**, either **size** or **percentage** can be set.

Parameter	Mandatory	Type	Description
percentage	No	Integer	Specifies the percentage of instances to be operated. When the operation is **ADD**, **REMOVE**, or **REDUCE**, the value is an integer from 1 to 20000. When the operation is **SET**, the value is an integer from 0 to 20000. ● If **scaling_resource_type** is set to **SCALING_GROUP**, either **size** or **percentage** can be set. If neither **size** nor **percentage** is set, the default value of **size** is **1**. ● If **scaling_resource_type** is set to **BANDWIDTH**, **percentage** is unavailable.
limits	No	Integer	Specifies the operation restrictions. If **scaling_resource_type** is set to **BANDWIDTH** and **operation** is not **SET**, this parameter takes effect and the unit is Mbit/s. ● If **operation** is set to **ADD**, this parameter indicates the maximum bandwidth allowed. ● If **operation** is set to **REDUCE**, this parameter indicates the minimum bandwidth allowed.

◳ NOTE

- The alarm value range of a refined scaling policy is the threshold of the alarm rule plus the upper and lower limits of the value range.
- If the lower limit of a value range is null, the minimum lower limit is **-1.174271E108**. If the upper limit of the range is null, the maximum upper limit is **1.174271E108**.

For example:

You set the alarm rule for an AS policy to **CPU usage ≥ 30%** and add the following two value ranges:

Scaling Action is set to **30% ≤ CPU usage < 60%, add 1 instance**. Then **lower_bound** should be set to **0** and **upper_bound** to **30**.

Scaling Action is set to **60% ≤ CPU usage < positive infinite, add 2 instances**. Then **lower_bound** should be set to **30** and **upper_bound** to **1.174271E108** or **null**.

- If neither the upper nor lower limit of a value range is null, they must be both greater than or equal to, or less than or equal to 0.
- If multiple refined scaling policies are added, their value ranges cannot overlap.
- If the operator of an alarm rule is =, no range can be added.

Example Request

This example creates an alarm-based scaling policy named **hth_aspolicy_1** using the alarm rule with ID **al1513822380493GvUKZwA8**. The action defined in the policy is to increase the bandwidth with ID **8ade64b5-d685-40b8-8582-4ce306ea37a6** by 1 Mbit/s when the alarm threshold configured in the alarm rule is reached until the bandwidth reaches 10 Mbit/s.

POST https://{Endpoint}/autoscaling-api/v2/{project_id}/scaling_policy

```
{
    "alarm_id": "al1513822380493GvUKZwA8",
    "cool_down_time": 900,
    "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
    "scaling_resource_type": "BANDWIDTH",
    "scaling_policy_action": {
        "size": 1,
        "operation": "ADD",
        "limits": 10
    },
    "scaling_policy_name": "hth_aspolicy_1",
    "scaling_policy_type": "ALARM"
}
```

Response

Table 5-85 Response parameters

Parameter	Type	Description
scaling_policy_id	String	Specifies the AS policy ID.

Example Response

```
{
    "scaling_policy_id": "0h327883-324n-4dzd-9c61-68d03ee191dd"
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.

Returned Value	Description
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.3 Modifying an AS Policy

Function

This API is used to modify a specified AS policy.

URI

PUT /autoscaling-api/v1/{project_id}/scaling_policy/{scaling_policy_id}

Table 5-86 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_policy_id	Yes	String	Specifies an AS policy ID. For details, see **Querying AS Policies Bound to an AS Group**.

Request

Table 5-87 Request parameters

Parameter	Mandatory	Type	Description
scaling_policy_ name	No	String	Specifies the AS policy name. The name contains only letters, digits, underscores (_), and hyphens (-), and cannot exceed 64 characters.
scaling_policy_ type	No	String	Specifies the AS policy type. ● **ALARM** (corresponding to **alarm_id**): indicates that the scaling action is triggered by an alarm. ● **SCHEDULED** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered as scheduled. ● **RECURRENCE** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered periodically.
alarm_id	No	String	Specifies the alarm rule ID. This parameter is mandatory when **scaling_policy_type** is set to **ALARM**. After this parameter is specified, the value of **scheduled_policy** does not take effect. After you modify an alarm policy, the system automatically adds an alarm triggering activity of the autoscaling type to the **alarm_actions** field in the alarm rule specified by the parameter value. You can obtain the parameter value by querying Cloud Eye alarm rules.
scheduled_poli cy	No	**schedule d_policy** object	Specifies the periodic or scheduled AS policy. This parameter is mandatory when **scaling_policy_type** is set to **SCHEDULED** or **RECURRENCE**. After this parameter is specified, the value of **alarm_id** does not take effect. For details, see **Table 5-88**.

Parameter	Mandatory	Type	Description
scaling_policy_action	No	**scaling_policy_action** object	Specifies the scaling action of the AS policy. For details, see **Table 5-89**.
cool_down_time	No	Integer	Specifies the cooldown period (in seconds). The value ranges from 0 to 86400.

Table 5-88 **scheduled_policy** field description

Parameter	Mandatory	Type	Description
launch_time	Yes	String	Specifies the time when the scaling action is triggered. The time format complies with UTC. ● If **scaling_policy_type** is set to **SCHEDULED**, the time format is **YYYY-MM-DDThh:mmZ**. ● If **scaling_policy_type** is set to **RECURRENCE**, the time format is **hh:mm**.
recurrence_type	No	String	Specifies the periodic triggering type. This parameter is mandatory when **scaling_policy_type** is set to **RECURRENCE**. ● **Daily**: indicates that the scaling action is triggered once a day. ● **Weekly**: indicates that the scaling action is triggered once a week. ● **Monthly**: indicates that the scaling action is triggered once a month.

Parameter	Mandatory	Type	Description
recurrence_value	No	String	Specifies the day when a periodic scaling action is triggered. This parameter is mandatory when **scaling_policy_type** is set to **RECURRENCE**. • If **recurrence_type** is set to **Daily**, the value is **null**, indicating that the scaling action is triggered once a day. • If **recurrence_type** is set to **Weekly**, the value ranges from **1** (Sunday) to **7** (Saturday). The digits refer to dates in each week and separated by a comma, such as **1,3,5**. • If **recurrence_type** is set to **Monthly**, the value ranges from **1** to **31**. The digits refer to the dates in each month and separated by a comma, such as **1,10,13,28**.
start_time	No	String	Specifies the start time of the scaling action triggered periodically. The time format complies with UTC. The time format is **YYYY-MM-DDThh:mmZ**.
end_time	No	String	Specifies the end time of the scaling action triggered periodically. The time format complies with UTC. This parameter is mandatory when **scaling_policy_type** is set to **RECURRENCE**. When the scaling action is triggered periodically, the end time cannot be earlier than the current and start time. The time format is **YYYY-MM-DDThh:mmZ**.

Table 5-89 scaling_policy_action field description

Parameter	Mandatory	Type	Description
operation	No	String	Specifies the operation to be performed. The default operation is **ADD**. • **ADD**: adds specified number of instances to the AS group. • **REMOVE/REDUCE**: removes or reduces specified number of instances from the AS group. • **SET**: sets the number of instances in the AS group.
instance_number	No	Integer	Specifies the number of instances to be operated. The default number is **1**. The value range is as follows for a default quota: • If **operation** is set to **SET**, the value ranges from **0** to **300**. • If **operation** is set to **ADD**, **REMOVE**, or **REDUCE**, the value ranges from **1** to **300**. **NOTE** Either **instance_number** or **instance_percentage** is required.
instance_percentage	No	Integer	Specifies the percentage of instances to be operated. You can increase, decrease, or set the number of instances in an AS group to the specified percentage of the current number of instances. If **operation** is set to **ADD**, **REMOVE** or **REDUCE**, the value is an integer from 1 to 20000. If **operation** is set to **SET**, the value is an integer from 0 to 20000. If neither **instance_number** nor **instance_percentage** is specified, the number of instances to be operated is 1. Either **instance_number** or **instance_percentage** is required.

Example Request

This example modifies the periodic AS policy with ID **0h327883-324n-4dzd-9c61-68d03ee191dd** for an AS group with two instances. The modification is as follows: The AS policy name is changed to **policy_01**, and

the policy is executed at 16:00 every day from 2016-01-08T17:31Z to 2016-02-08T17:31Z.

```
PUT https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_policy/
0h327883-324n-4dzd-9c61-68d03ee191dd

{
    "scaling_policy_type": "RECURRENCE",
    "scaling_policy_name": "policy_01",
    "scheduled_policy": {
        "launch_time": "16:00",
        "recurrence_type": "Daily",
        "end_time": "2016-02-08T17:31Z",
        "start_time": "2016-01-08T17:31Z"
    },
    "scaling_policy_action": {
        "operation": "SET",
        "instance_number": 2
    }
}
```

Response

Parameter	Type	Description
scaling_policy_id	String	Specifies the AS policy ID.

Example Response

```
{
    "scaling_policy_id": "0h327883-324n-4dzd-9c61-68d03ee191dd"
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.

Returned Value	Description
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.4 Modifying an AS Policy (V2)

Function

This API is used to modify a specified AS policy.

The difference between the V2 and V1 APIs for modifying an AS policy is that V2 supports modifying a scaling resource type.

URI

PUT /autoscaling-api/v2/{project_id}/scaling_policy/{scaling_policy_id}

Table 5-90 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_policy_id	Yes	String	Specifies an AS policy ID. For details, see **Querying AS Policies Bound to a Scaling Resource (V2)**.

Request

Table 5-91 Request parameters

Parameter	Mandatory	Type	Description
scaling_policy_ name	No	String	Specifies the AS policy name. The name contains only letters, digits, underscores (_), and hyphens (-), and cannot exceed 64 characters.
scaling_policy_ type	No	String	Specifies the AS policy type. • **ALARM** (corresponding to **alarm_id**): indicates that the scaling action is triggered by an alarm. • **SCHEDULED** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered as scheduled. • **RECURRENCE** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered periodically. • **INTERVAL_ALARM** (corresponding to **alarm_id**): indicates that the scaling action is triggered by a refined scaling policy.
scaling_resourc e_id	No	String	Specifies the scaling resource ID, which is the ID of a unique AS group or bandwidth.
scaling_resourc e_type	No	String	Specifies the scaling resource type. • AS group: **SCALING_GROUP** • Bandwidth: **BANDWIDTH**

Parameter	Mandatory	Type	Description
alarm_id	No	String	Specifies the alarm rule ID. This parameter is mandatory when **scaling_policy_type** is set to **ALARM**. After this parameter is specified, the value of **scheduled_policy** does not take effect. After you modify an alarm policy, the system automatically adds an alarm triggering activity of the autoscaling type to the **alarm_actions** field in the alarm rule specified by the parameter value. You can obtain the parameter value by querying Cloud Eye alarm rules.
scheduled_poli cy	No	**schedul ed_polic y** object	Specifies the periodic or scheduled AS policy. This parameter is mandatory when **scaling_policy_type** is set to **SCHEDULED** or **RECURRENCE**. After this parameter is specified, the value of **alarm_id** does not take effect. For details, see **Table 5-92**.
scaling_policy_ action	No	**scaling_ policy_a ction** object	Specifies the scaling action of the AS policy. For details, see **Table 5-93**.
interval_alarm _actions	No	Array of **interval _alarm_ actions** objects	Specifies the value range of an alarm policy. This parameter is valid and mandatory when **scaling_policy_type** is set to **INTERVAL_ALARM**. For details, see **Table 5-94**.
cool_down_tim e	No	Integer	Specifies the cooldown period (in seconds). The value ranges from 0 to 86,400.
description	No	String	Specifies the description of the AS policy. The value can contain 1 to 256 characters.

Table 5-92 scheduled_policy field description

Parameter	Mandatory	Type	Description
launch_time	Yes	String	Specifies the time when the scaling action is triggered. The time format complies with UTC. ● If **scaling_policy_type** is set to **SCHEDULED**, the time format is **YYYY-MM-DDThh:mmZ**. ● If **scaling_policy_type** is set to **RECURRENCE**, the time format is **hh:mm**.
recurrence_typ e	No	String	Specifies the periodic triggering type. This parameter is mandatory when **scaling_policy_type** is set to **RECURRENCE**. ● **Daily**: indicates that the scaling action is triggered once a day. ● **Weekly**: indicates that the scaling action is triggered once a week. ● **Monthly**: indicates that the scaling action is triggered once a month.
recurrence_val ue	No	String	Specifies the day when a periodic scaling action is triggered. This parameter is mandatory when **scaling_policy_type** is set to **RECURRENCE**. ● If **recurrence_type** is set to **Daily**, the value is **null**, indicating that the scaling action is triggered once a day. ● If **recurrence_type** is set to **Weekly**, the value ranges from **1** (Sunday) to **7** (Saturday). The digits refer to dates in each week and separated by a comma, such as **1,3,5**. ● If **recurrence_type** is set to **Monthly**, the value ranges from **1** to **31**. The digits refer to the dates in each month and separated by a comma, such as **1,10,13,28**.

Parameter	Mandatory	Type	Description
start_time	No	String	Specifies the start time of the scaling action triggered periodically. The time format complies with UTC. The time format is **YYYY-MM-DDThh:mmZ**.
end_time	No	String	Specifies the end time of the scaling action triggered periodically. The time format complies with UTC. This parameter is mandatory when **scaling_policy_type** is set to **RECURRENCE**. When the scaling action is triggered periodically, the end time cannot be earlier than the current and start time. The time format is **YYYY-MM-DDThh:mmZ**.

Table 5-93 scaling_policy_action field description

Parameter	Mandatory	Type	Description

operation	No	String	Specifies the operation to be performed. The default operation is **ADD**.
			
			● If **scaling_resource_type** is set to **SCALING_GROUP**, the following operations are supported:
			  – **ADD**: indicates adding instances.
			  – **REMOVE/REDUCE**: indicates removing or reducing instances.
			  – **SET**: indicates setting the number of instances to a specified value.
			● If **scaling_resource_type** is set to **BANDWIDTH**, the following operations are supported:
			  – **ADD**: indicates adding instances.
			  – **REDUCE**: indicates reducing instances.
			  – **SET**: indicates setting the number of instances to a specified value.

size	No	Integer	Specifies the operation size. The value is an integer from 0 to 300. The default value is **1**. This parameter can be set to **0** only when **operation** is set to **SET**. ● If **scaling_resource_type** is set to **SCALING_GROUP**, this parameter indicates the number of instances. The value is an integer from 0 to 300 and the default value is **1**. ● If **scaling_resource_type** is set to **BANDWIDTH**, this parameter indicates the bandwidth (Mbit/s). The value is an integer from 1 to 300 and the default value is **1**. ● If **scaling_resource_type** is set to **SCALING_GROUP**, either **size** or **percentage** can be set.

Parameter	Mandatory	Type	Description
percentage	No	Integer	Specifies the percentage of instances to be operated. If **operation** is set to **ADD**, **REMOVE**, or **REDUCE**, the value of this parameter is an integer from 1 to 20000. If **operation** is set to **SET**, the value is an integer from 0 to 20000. ● If **scaling_resource_type** is set to **SCALING_GROUP**, either **size** or **percentage** can be set. If neither **size** nor **percentage** is set, the default value of **size** is **1**. ● If **scaling_resource_type** is set to **BANDWIDTH**, **percentage** is unavailable.
limits	No	Integer	Specifies the operation restrictions. If **scaling_resource_type** is set to **BANDWIDTH** and **operation** is not **SET**, this parameter takes effect and the unit is Mbit/s. ● If **operation** is set to **ADD**, this parameter indicates the maximum bandwidth allowed. ● If **operation** is set to **REDUCE**, this parameter indicates the minimum bandwidth allowed.

Table 5-94 interval_alarm_actions field description

Parameter	Mandatory	Type	Description
lower_bound	No	double	Specifies the lower limit of the value range. The value is null by default. If the lower limit of the value range is null, the upper limit must be less than or equal to 0. The minimum lower limit allowed is **-1.174271E108**.

Parameter	Mandatory	Type	Description
upper_bound	No	double	Specifies the upper limit of the value range. The value is null by default. If the upper limit of the range is null, the lower limit must be greater than or equal to 0. The maximum upper limit allowed is **1.174271E108**.

operation	No	String	Specifies the operation to be performed. The default operation is **ADD**.
			
			● If **scaling_resource_type** is set to **SCALING_GROUP**, the following operations are supported:
			  – **ADD**: indicates adding instances.
			  – **REMOVE/REDUCE**: indicates removing or reducing instances.
			  – **SET**: indicates setting the number of instances to a specified value.
			● If **scaling_resource_type** is set to **BANDWIDTH**, the following operations are supported:
			  – **ADD**: indicates adding instances.
			  – **REDUCE**: indicates reducing instances.
			  – **SET**: indicates setting the number of instances to a specified value.

size	No	Integer	Specifies the operation size. The value is an integer from 0 to 300. The default value is **1**. This parameter can be set to **0** only when **operation** is set to **SET**. ● If **scaling_resource_type** is set to **SCALING_GROUP**, this parameter indicates the number of instances. The value is an integer from 0 to 300 and the default value is **1**. ● If **scaling_resource_type** is set to **BANDWIDTH**, this parameter indicates the bandwidth (Mbit/s). The value is an integer from 1 to 300 and the default value is **1**. ● If **scaling_resource_type** is set to **SCALING_GROUP**, either **size** or **percentage** can be set.

Parameter	Mandatory	Type	Description
percentage	No	Integer	Specifies the percentage of instances to be operated. When the operation is **ADD**, **REMOVE**, or **REDUCE**, the value is an integer from 1 to 20000. When the operation is **SET**, the value is an integer from 0 to 20000. ● If **scaling_resource_type** is set to **SCALING_GROUP**, either **size** or **percentage** can be set. If neither **size** nor **percentage** is set, the default value of **size** is **1**. ● If **scaling_resource_type** is set to **BANDWIDTH**, **percentage** is unavailable.
limits	No	Integer	Specifies the operation restrictions. If **scaling_resource_type** is set to **BANDWIDTH** and **operation** is not **SET**, this parameter takes effect and the unit is Mbit/s. ● If **operation** is set to **ADD**, this parameter indicates the maximum bandwidth allowed. ● If **operation** is set to **REDUCE**, this parameter indicates the minimum bandwidth allowed.

 NOTE

- The alarm value range of a refined scaling policy is the threshold of the alarm rule plus the upper and lower limits of the value range.
- If the lower limit of a value range is null, the minimum lower limit is **-1.174271E108**. If the upper limit of the range is null, the maximum upper limit is **1.174271E108**.

For example:

You set the alarm rule for an AS policy to **CPU usage ≥ 30%** and add the following two value ranges:

Scaling Action is set to **30% ≤ CPU usage < 60%, add 1 instance**. Then **lower_bound** should be set to **0** and **upper_bound** to **30**.

Scaling Action is set to **60% ≤ CPU usage < positive infinite, add 2 instances**. Then **lower_bound** should be set to **30** and **upper_bound** to **1.174271E108** or **null**.

- If neither the upper nor lower limit of a value range is null, they must be both greater than or equal to, or less than or equal to 0.
- If multiple refined scaling policies are added, their value ranges cannot overlap.
- If the operator of an alarm rule is =, no range can be added.

Example Request

This example modifies an AS policy with ID **0h327883-324n-4dzd-9c61-68d03ee191dd**. The AS policy name is changed to **hth_aspolicy_1**, the alarm rule ID is changed to **al1513822380493GvlJKZwA8**, the cooldown period is changed to 900 seconds, and the scaling action is changed to increase the bandwidth by 1 Mbit/s until the bandwidth reaches 10 Mbit/s.

```
PUT https://{Endpoint}/autoscaling-api/v2/{project_id}/scaling_policy/
0h327883-324n-4dzd-9c61-68d03ee191dd

{
    "alarm_id": "al1513822380493GvlJKZwA8",
    "cool_down_time": 900,
    "scaling_policy_action": {
        "size": 1,
        "operation": "ADD",
        "limits": 10
    },
    "scaling_policy_name": "hth_aspolicy_1",
    "scaling_policy_type": "ALARM"
}
```

Response

Table 5-95 Response parameters

Parameter	Type	Description
scaling_policy_id	String	Specifies the AS policy ID.

Example Response

```
{
    "scaling_policy_id": "0h327883-324n-4dzd-9c61-68d03ee191dd"
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.

Returned Value	Description
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.5 Querying AS Policies Bound to an AS Group

Function

This API is used to query AS policies based on search criteria. The results are displayed by page.

- Search criteria can be the AS policy name, policy type, policy ID, start line number, and number of records.
- If no search criteria are specified, a maximum of 20 AS policies for a specified AS group can be queried for a tenant by default.

URI

GET /autoscaling-api/v1/{project_id}/scaling_policy/{scaling_group_id}/list

☐ NOTE

You can type the question mark (?) and ampersand (&) at the end of the URI to define multiple search criteria. AS policies can be searched by all optional parameters in the following table. For details, see the example request.

Table 5-96 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.
scaling_policy_name	No	String	Specifies the AS policy name. Supports fuzzy search.
scaling_policy_type	No	String	Specifies the AS policy type. • **ALARM**: alarm policy • **SCHEDULED**: scheduled policy • **RECURRENCE**: periodic policy
scaling_policy_id	No	String	Specifies the AS policy ID.
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum parameter value is **0**.
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value ranges from 0 to 100.

Request

None

Example Request

This example queries scheduled AS policies named **as-policy-test** of the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

```
GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_policy/e5d27f5c-dd76-4a61-b4bc-
a67c5686719a/list?scaling_policy_name=as-policy-test&scaling_policy_type=SCHEDULED
```

Response

Table 5-97 Response parameters

Parameter	Type	Description
total_number	Integer	Specifies the total number of query records.
start_number	Integer	Specifies the start line number.

Parameter	Type	Description
limit	Integer	Specifies the maximum number of resources to be queried.
scaling_policies	Array of **scaling_policies** objects	Specifies scaling policies. For details, see **Table 5-98**.

Table 5-98 scaling_policies field description

Parameter	Type	Description
scaling_group_id	String	Specifies the AS group ID.
scaling_policy_name e	String	Specifies the AS policy name.
scaling_policy_id	String	Specifies the AS policy ID.
policy_status	String	Specifies the AS policy status. ● **INSERVICE**: The AS policy is enabled. ● **PAUSED**: The AS policy is disabled. ● **EXECUTING**: The AS policy is being executed.
scaling_policy_type	String	Specifies the AS policy type. ● **ALARM**: indicates that the scaling action is triggered by an alarm. A value is returned for **alarm_id**, and no value is returned for **scheduled_policy**. ● **SCHEDULED**: indicates that the scaling action is triggered as scheduled. A value is returned for **scheduled_policy**, and no value is returned for **alarm_id**, **recurrence_type**, **recurrence_value**, **start_time**, or **end_time**. ● **RECURRENCE**: indicates that the scaling action is triggered periodically. Values are returned for **scheduled_policy**, **recurrence_type**, **recurrence_value**, **start_time**, and **end_time**, and no value is returned for **alarm_id**.
alarm_id	String	Specifies the alarm ID.
scheduled_policy	**scheduled_policy** object	Specifies the periodic or scheduled AS policy. For details, see **Table 5-99**.

Parameter	Type	Description
scaling_policy_actio n	**scaling_poli cy_action** object	Specifies the scaling action of the AS policy. For details, see **Table 5-100**.
cool_down_time	Integer	Specifies the cooldown period (s).
create_time	String	Specifies the time when an AS policy was created. The time format complies with UTC.

Table 5-99 scheduled_policy field description

Parameter	Type	Description
launch_time	String	Specifies the time when the scaling action is triggered. The time format complies with UTC. ● If **scaling_policy_type** is set to **SCHEDULED**, the time format is **YYYY-MM-DDThh:mmZ**. ● If **scaling_policy_type** is set to **RECURRENCE**, the time format is **hh:mm**.
recurrence_type	String	Specifies the type of a periodically triggered scaling action. ● **Daily**: indicates that the scaling action is triggered once a day. ● **Weekly**: indicates that the scaling action is triggered once a week. ● **Monthly**: indicates that the scaling action is triggered once a month.
recurrence_value	String	Specifies the frequency at which scaling actions are triggered. ● If **recurrence_type** is set to **Daily**, the value is **null**, indicating that the scaling action is triggered once a day. ● If **recurrence_type** is set to **Weekly**, the value ranges from **1** (Sunday) to **7** (Saturday). The digits refer to dates in each week and separated by a comma, such as **1,3,5**. ● If **recurrence_type** is set to **Monthly**, the value ranges from **1** to **31**. The digits refer to the dates in each month and separated by a comma, such as **1,10,13,28**.

Parameter	Type	Description
start_time	String	Specifies the start time of the scaling action triggered periodically. The time format complies with UTC. The time format is **YYYY-MM-DDThh:mmZ**.
end_time	String	Specifies the end time of the scaling action triggered periodically. The time format complies with UTC. The time format is **YYYY-MM-DDThh:mmZ**.

Table 5-100 scaling_policy_action field description

Parameter	Type	Description
operation	String	Specifies the scaling action. ● **ADD**: adds specified number of instances to the AS group. ● **REMOVE**: removes specified number of instances from the AS group. ● **SET**: sets the number of instances in the AS group.
instance_number	Integer	Specifies the number of instances to be operated.
instance_percentage	Integer	Specifies the percentage of instances to be operated.

Example Response

```
{
    "limit": 20,
    "total_number": 1,
    "start_number": 0,
    "scaling_policies": [
        {
            "scaling_policy_id": "fd7d63ce-8f5c-443e-b9a0-bef9386b23b3",
            "scaling_group_id": "e5d27f5c-dd76-4a61-b4bc-a67c5686719a",
            "scaling_policy_name": "as-policy-test",
            "scaling_policy_type": "SCHEDULED",
            "scheduled_policy": {
                "launch_time": "2015-07-24T01:21Z"
            },
            "cool_down_time": 300,
            "scaling_policy_action": {
                "operation": "REMOVE",
                "instance_number": 1
            },
            "policy_status": "INSERVICE",
            "create_time": "2015-07-24T01:09:30Z"
```

```
      }
   ]
}
```

Returned Value

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.6 Querying AS Policies Bound to a Scaling Resource (V2)

Function

This API is used to query AS policies based on search criteria. The results are displayed by page.

- The difference between the V2 and V1 APIs for querying AS policies is that V2 contains scaling resource types in response messages.

- Search criteria can be the AS policy name, policy type, policy ID, start line number, and number of records.

- If no search criteria are specified, a maximum of 20 AS policies for specified resources can be queried for a tenant by default.

URI

GET /autoscaling-api/v2/{project_id}/scaling_policy/{scaling_resource_id}/list

◌ **NOTE**

You can type the question mark (?) and ampersand (&) at the end of the URI to define multiple search criteria. AS policies can be searched by all optional parameters in the following table. For details, see the example request.

Table 5-101 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_resource_id	Yes	String	Specifies the scaling resource ID.
scaling_policy_name	No	String	Specifies the AS policy name. Supports fuzzy search.
scaling_policy_type	No	String	Specifies the AS policy type. • **ALARM**: alarm policy • **SCHEDULED**: scheduled policy • **RECURRENCE**: periodic policy • **INTERVAL_ALARM** (corresponding to **alarm_id**): indicates that the scaling action is triggered by a refined scaling policy.
scaling_policy_id	No	String	Specifies the AS policy ID.
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum parameter value is **0**.

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value range is 0 to 100.

Request

None

Example Request

This example shows how to query all periodic AS policies for the resource with ID **8ade64b5-d685-40b8-8582-4ce306ea37a6**.

```
GET https://{Endpoint}/autoscaling-api/v2/{project_id}/scaling_policy/8ade64b5-
d685-40b8-8582-4ce306ea37a6/list?scaling_policy_type=RECURRENCE
```

Response

Table 5-102 Response parameters

Parameter	Type	Description
total_number	Integer	Specifies the total number of query records.
start_number	Integer	Specifies the start line number.
limit	Integer	Specifies the maximum number of resources to be queried.
scaling_policies	Array of **scaling_policies** objects	Specifies AS policies. For details, see **Table 5-103**.

Table 5-103 scaling_policies field description

Parameter	Type	Description
scaling_policy_name	String	Specifies the AS policy name. Supports fuzzy search.
scaling_policy_id	String	Specifies the AS policy ID.
scaling_resource_id	String	Specifies the scaling resource ID.
scaling_resource_type	String	Specifies the scaling resource type. ● AS group: **SCALING_GROUP** ● Bandwidth: **BANDWIDTH**

Parameter	Type	Description
policy_status	String	Specifies the AS policy status. ● **INSERVICE**: The AS policy is enabled. ● **PAUSED**: The AS policy is disabled. ● **EXECUTING**: The AS policy is being executed.
scaling_policy_type	String	Specifies the AS policy type. ● **ALARM**: indicates that the scaling action is triggered by an alarm. A value is returned for **alarm_id**, and no value is returned for **scheduled_policy**. ● **SCHEDULED**: indicates that the scaling action is triggered as scheduled. A value is returned for **scheduled_policy**, and no value is returned for **alarm_id**, **recurrence_type**, **recurrence_value**, **start_time**, or **end_time**. ● **RECURRENCE**: indicates that the scaling action is triggered periodically. Values are returned for **scheduled_policy**, **recurrence_type**, **recurrence_value**, **start_time**, and **end_time**, and no value is returned for **alarm_id**. ● **INTERVAL_ALARM**: indicates that the scaling action is triggered by a refined scaling policy. A value is returned for **alarm_id**, and no value is returned for **scheduled_policy**.
alarm_id	String	Specifies the alarm ID.
scheduled_policy	**scheduled_policy** object	Specifies the periodic or scheduled AS policy. For details, see **Table 5-104**.
scaling_policy_action	**scaling_policy_action** object	Specifies the scaling action of the AS policy. For details, see **Table 5-105**.
interval_alarm_actions	Array of **interval_alarm_actions** objects	Specifies the scaling action applied when **scaling_policy_type** is set to **INTERVAL_ALARM**. For details, see **Table 5-106**.
cool_down_time	Integer	Specifies the cooldown period (s).
create_time	String	Specifies the time when an AS policy was created. The time format complies with UTC.
meta_data	**meta_data** object	Provides additional information. For details, see **Table 5-107**.

Parameter	Type	Description
description	String	Specifies the AS policy description.

Table 5-104 scheduled_policy field description

Parameter	Type	Description
launch_time	String	Specifies the time when the scaling action is triggered. The time format complies with UTC. ● If **scaling_policy_type** is set to **SCHEDULED**, the time format is **YYYY-MM-DDThh:mmZ**. ● If **scaling_policy_type** is set to **RECURRENCE**, the time format is **hh:mm**.
recurrence_type	String	Specifies the type of a periodically triggered scaling action. ● **Daily**: indicates that the scaling action is triggered once a day. ● **Weekly**: indicates that the scaling action is triggered once a week. ● **Monthly**: indicates that the scaling action is triggered once a month.
recurrence_value	String	Specifies the frequency at which scaling actions are triggered. ● If **recurrence_type** is set to **Daily**, the value is **null**, indicating that the scaling action is triggered once a day. ● If **recurrence_type** is set to **Weekly**, the value ranges from **1** (Sunday) to **7** (Saturday). The digits refer to dates in each week and separated by a comma, such as **1,3,5**. ● If **recurrence_type** is set to **Monthly**, the value ranges from **1** to **31**. The digits refer to the dates in each month and separated by a comma, such as **1,10,13,28**.
start_time	String	Specifies the start time of the scaling action triggered periodically. The time format complies with UTC. The time format is **YYYY-MM-DDThh:mmZ**.

Parameter	Type	Description
end_time	String	Specifies the end time of the scaling action triggered periodically. The time format complies with UTC. The time format is **YYYY-MM-DDThh:mmZ**.

Table 5-105 scaling_policy_action field description

Parameter	Type	Description
operation	String	Specifies the scaling action. ● **ADD**: indicates adding instances. ● **REDUCE**: indicates reducing instances. ● **SET**: indicates setting the number of instances to a specified value.
size	Integer	Specifies the number of instances to be operated.
percentage	Integer	Specifies the percentage of instances to be operated.
limits	Integer	Specifies the operation restrictions.

Table 5-106 interval_alarm_actions field description

Parameter	Manda tory	Type	Description
lower_bound	No	double	Specifies the lower limit of the value range.
upper_bound	No	double	Specifies the upper limit of the value range.
operation	No	String	Specifies the operation to be performed. ● **ADD**: indicates adding instances. ● **REDUCE**: indicates reducing instances. ● **SET**: indicates setting the number of instances to a specified value.
size	No	Integer	Specifies the operation size.
percentage	No	Integer	Specifies the percentage of instances to be operated.
limits	No	Integer	Specifies the operation restrictions.

Table 5-107 meta_data field description

Parameter	Type	Description
metadata_bandwidth_share_type	String	Specifies the bandwidth sharing type in the bandwidth scaling policy.
metadata_eip_id	String	Specifies the EIP ID for the bandwidth in the bandwidth scaling policy.
metadata_eip_address	String	Specifies the EIP for the bandwidth in the bandwidth scaling policy.

Example Response

```
{
    "limit": 20,
    "total_number": 3,
    "start_number": 0,
    "scaling_policies": [
        {
            "scaling_policy_id": "803a35a5-38fb-4d27-a042-496c14bc1fb8",
            "scaling_policy_name": "as-policy-7a75",
            "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
            "scaling_resource_type": "SCALING_GROUP",
            "scaling_policy_type": "RECURRENCE",
            "scheduled_policy": {
                "launch_time": "03:30",
                "recurrence_type": "Daily",
                "start_time": "2017-08-28T03:08Z",
                "end_time": "2017-09-01T03:08Z"
            },
            "cool_down_time": 900,
            "scaling_policy_action": {
                "operation": "ADD",
                "size": 1
            },
            "policy_status": "INSERVICE",
            "create_time": "2017-08-31T03:02:41Z"
        },
        {
            "scaling_policy_id": "535fd67e-276b-409c-879e-52f4e09e14bb",
            "scaling_policy_name": "as-policy-7a75",
            "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
            "scaling_resource_type": "SCALING_GROUP",
            "scaling_policy_type": "RECURRENCE",
            "scheduled_policy": {
                "launch_time": "21:30",
                "recurrence_type": "Daily",
                "start_time": "2017-08-27T21:08Z",
                "end_time": "2017-08-31T21:08Z"
            },
            "cool_down_time": 900,
            "scaling_policy_action": {
                "operation": "ADD",
                "size": 1
            },
            "policy_status": "INSERVICE",
            "create_time": "2017-08-31T07:35:05Z"
        },
        {
            "scaling_policy_id": "37df92f8-73cb-469e-a420-c15f445d2ee1",
            "scaling_policy_name": "as-policy-7a75",
            "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
            "scaling_resource_type": "SCALING_GROUP",
```

```
                    "scaling_policy_type": "RECURRENCE",
                    "scheduled_policy": {
                        "launch_time": "22:30",
                        "recurrence_type": "Daily",
                        "start_time": "2017-08-27T22:08Z",
                        "end_time": "2017-08-31T22:08Z"
                    },
                    "cool_down_time": 900,
                    "scaling_policy_action": {
                        "operation": "ADD",
                        "size": 1
                    },
                    "policy_status": "INSERVICE",
                    "create_time": "2017-08-31T07:41:06Z"
                }
            ]
        }
```

Returned Values

- Normal

  200

- Abnormal

Returned Values	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.

Returned Values	Description
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.7 Querying AS Policies (V2)

Function

This API is used to query all AS policies for a tenant based on search criteria. The results are displayed by page.

- Search criteria can be the AS resource ID, AS resource type, AS policy name, AS policy ID, alarm ID, start line number, number of records, and sorting method.

- If no search criteria are specified, a maximum of 20 AS policies can be queried for a tenant by default.

URI

GET /autoscaling-api/v2/{project_id}/scaling_policy

☐ NOTE

You can type the question mark (?) and ampersand (&) at the end of the URI to define multiple search criteria. AS policies can be searched by all optional parameters in the following table. For details, see the example request.

Table 5-108 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_resource_id	No	String	Specifies the scaling resource ID.
scaling_resource_type	No	String	Specifies the scaling resource type. • AS group: **SCALING_GROUP** • Bandwidth: **BANDWIDTH**
scaling_policy_name	No	String	Specifies the AS policy name. Supports fuzzy search.

Parameter	Mandatory	Type	Description
scaling_policy _id	No	String	Specifies the AS policy ID.
scaling_policy _type	No	String	Specifies the AS policy type. ● **ALARM**: alarm policy ● **SCHEDULED**: scheduled policy ● **RECURRENCE**: periodic policy ● **INTERVAL_ALARM** (corresponding to **alarm_id**): indicates that the scaling action is triggered by a refined scaling policy.
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum parameter value is **0**.
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value ranges from 0 to 100.
sort_by	No	String	Specifies the sorting method. ● **POLICY_NAME**: AS policies are sorted by name. ● **TRIGGER_CONDITION**: AS policies are sorted by trigger condition. For example, in ascending order, alarm policies are first, and others are sorted in ascending order based on the latest triggering time. ● **CREATE_TIME**: AS policies are sorted based on the creation time.
order	No	String	Specifies the sorting order. ● **ASC**: ascending order ● **DESC**: descending order
alarm_id	No	String	Specifies the alarm rule ID.

Request

None

Example Request

This example queries all periodic AS policies for the resource with ID **8ade64b5-d685-40b8-8582-4ce306ea37a6**.

GET https://{Endpoint}/autoscaling-api/v2/{project_id}/scaling_policy?scaling_resource_id=8ade64b5-d685-40b8-8582-4ce306ea37a6&scaling_policy_type=RECURRENCE

Response

Table 5-109 Response parameters

Parameter	Type	Description
total_number	Integer	Specifies the total number of query records.
start_number	Integer	Specifies the start line number.
limit	Integer	Specifies the maximum number of resources to be queried.
scaling_policies	Array of **scaling_policies** objects	Specifies AS policies. For details, see **Table 5-110**.

Table 5-110 scaling_policies field description

Parameter	Type	Description
scaling_policy_name	String	Specifies the AS policy name.
scaling_policy_id	String	Specifies the AS policy ID.
scaling_resource_id	String	Specifies the scaling resource ID.
scaling_resource_type	String	Specifies the scaling resource type. • AS group: **SCALING_GROUP** • Bandwidth: **BANDWIDTH**
policy_status	String	Specifies the AS policy status. • **INSERVICE**: The AS policy is enabled. • **PAUSED**: The AS policy is disabled. • **EXECUTING**: The AS policy is being executed.

Parameter	Type	Description
scaling_policy_type	String	Specifies the AS policy type. ● **ALARM**: indicates that the scaling action is triggered by an alarm. A value is returned for **alarm_id**, and no value is returned for **scheduled_policy**. ● **SCHEDULED**: indicates that the scaling action is triggered as scheduled. A value is returned for **scheduled_policy**, and no value is returned for **alarm_id**, **recurrence_type**, **recurrence_value**, **start_time**, or **end_time**. ● **RECURRENCE**: indicates that the scaling action is triggered periodically. Values are returned for **scheduled_policy**, **recurrence_type**, **recurrence_value**, **start_time**, and **end_time**, and no value is returned for **alarm_id**. ● **INTERVAL_ALARM**: indicates that the scaling action is triggered by a refined scaling policy. A value is returned for **alarm_id**, and no value is returned for **scheduled_policy**.
alarm_id	String	Specifies the alarm ID.
scheduled_policy	**scheduled_policy** object	Specifies the periodic or scheduled AS policy. For details, see **Table 5-111**.
scaling_policy_action	**scaling_policy_action** object	Specifies the scaling action of the AS policy. For details, see **Table 5-112**.
interval_alarm_actions	Array of **interval_alarm_actions** objects	Specifies the scaling action applied when **scaling_policy_type** is set to **INTERVAL_ALARM**. For details, see **Table 5-113**.
cool_down_time	Integer	Specifies the cooldown period (s).
create_time	String	Specifies the time when an AS policy was created. The time format complies with UTC.
meta_data	**meta_data** object	Provides additional information. For details, see **Table 5-114**.
description	String	Specifies the AS policy description.

Table 5-111 scheduled_policy field description

Parameter	Type	Description
launch_time	String	Specifies the time when the scaling action is triggered. The time format complies with UTC. ● If **scaling_policy_type** is set to **SCHEDULED**, the time format is **YYYY-MM-DDThh:mmZ**. ● If **scaling_policy_type** is set to **RECURRENCE**, the time format is **hh:mm**.
recurrence_type	String	Specifies the type of a periodically triggered scaling action. ● **Daily**: indicates that the scaling action is triggered once a day. ● **Weekly**: indicates that the scaling action is triggered once a week. ● **Monthly**: indicates that the scaling action is triggered once a month.
recurrence_value	String	Specifies the frequency at which scaling actions are triggered. ● If **recurrence_type** is set to **Daily**, the value is **null**, indicating that the scaling action is triggered once a day. ● If **recurrence_type** is set to **Weekly**, the value ranges from **1** (Sunday) to **7** (Saturday). The digits refer to dates in each week and separated by a comma, such as **1,3,5**. ● If **recurrence_type** is set to **Monthly**, the value ranges from **1** to **31**. The digits refer to the dates in each month and separated by a comma, such as **1,10,13,28**.
start_time	String	Specifies the start time of the scaling action triggered periodically. The time format complies with UTC. The time format is **YYYY-MM-DDThh:mmZ**.
end_time	String	Specifies the end time of the scaling action triggered periodically. The time format complies with UTC. The time format is **YYYY-MM-DDThh:mmZ**.

Table 5-112 scaling_policy_action field description

Parameter	Type	Description
operation	String	Specifies the scaling action. ● **ADD**: indicates adding instances. ● **REDUCE**: indicates reducing instances. ● **SET**: indicates setting the number of instances to a specified value.
size	Integer	Specifies the number of instances to be operated.
percentage	Integer	Specifies the percentage of instances to be operated.
limits	Integer	Specifies the operation restrictions.

Table 5-113 interval_alarm_actions field description

Parameter	Manda tory	Type	Description
lower_bound	No	double	Specifies the lower limit of the value range.
upper_bound	No	double	Specifies the upper limit of the value range.
operation	No	String	Specifies the operation to be performed. ● **ADD**: indicates adding instances. ● **REDUCE**: indicates reducing instances. ● **SET**: indicates setting the number of instances to a specified value.
size	No	Integer	Specifies the operation size.
percentage	No	Integer	Specifies the percentage of instances to be operated.
limits	No	Integer	Specifies the operation restrictions.

Table 5-114 meta_data field description

Parameter	Type	Description
metadata_band width_share_typ e	String	Specifies the bandwidth sharing type in the bandwidth scaling policy.

Parameter	Type	Description
metadata_eip_id	String	Specifies the EIP ID for the bandwidth in the bandwidth scaling policy.
metadata_eip_address	String	Specifies the EIP for the bandwidth in the bandwidth scaling policy.

Example Response

```
{
    "limit": 20,
    "total_number": 3,
    "start_number": 0,
    "scaling_policies": [
        {
            "scaling_policy_id": "803a35a5-38fb-4d27-a042-496c14bc1fb8",
            "scaling_policy_name": "as-policy-7a75",
            "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
            "scaling_resource_type": "SCALING_GROUP",
            "scaling_policy_type": "RECURRENCE",
            "scheduled_policy": {
                "launch_time": "03:30",
                "recurrence_type": "Daily",
                "start_time": "2017-08-28T03:08Z",
                "end_time": "2017-09-01T03:08Z"
            },
            "cool_down_time": 900,
            "scaling_policy_action": {
                "operation": "ADD",
                "size": 1
            },
            "policy_status": "INSERVICE",
            "create_time": "2017-08-31T03:02:41Z"
        },
        {
            "scaling_policy_id": "535fd67e-276b-409c-879e-52f4e09e14bb",
            "scaling_policy_name": "as-policy-7a75",
            "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
            "scaling_resource_type": "SCALING_GROUP",
            "scaling_policy_type": "RECURRENCE",
            "scheduled_policy": {
                "launch_time": "21:30",
                "recurrence_type": "Daily",
                "start_time": "2017-08-27T21:08Z",
                "end_time": "2017-08-31T21:08Z"
            },
            "cool_down_time": 900,
            "scaling_policy_action": {
                "operation": "ADD",
                "size": 1
            },
            "policy_status": "INSERVICE",
            "create_time": "2017-08-31T07:35:05Z",
"meta_data": {
                "metadata_eip_id": "263f0886-de6a-4e21-ad83-814ca9f3844e",
                "metadata_eip_address": "255.255.255.255"
            }
        },
        {
            "scaling_policy_id": "37df92f8-73cb-469e-a420-c15f445d2ee1",
            "scaling_policy_name": "as-policy-7a75",
            "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
            "scaling_resource_type": "SCALING_GROUP",
            "scaling_policy_type": "RECURRENCE",
```

```
        "scheduled_policy": {
            "launch_time": "22:30",
            "recurrence_type": "Daily",
            "start_time": "2017-08-27T22:08Z",
            "end_time": "2017-08-31T22:08Z"
        },
        "cool_down_time": 900,
        "scaling_policy_action": {
            "operation": "ADD",
            "size": 1
        },
        "policy_status": "INSERVICE",
        "create_time": "2017-08-31T07:41:06Z",
"meta_data": {
            "metadata_eip_id": "263f0886-de6a-4e21-ad83-814ca9f3844e",
            "metadata_eip_address": "255.255.255.255"
        }
    }
  ]
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Values	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.

Returned Values	Description
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.8 Querying an AS Policy

Function

This API is used to query details about a specified AS policy by policy ID.

URI

GET /autoscaling-api/v1/{project_id}/scaling_policy/{scaling_policy_id}

Table 5-115 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_policy_id	Yes	String	Specifies the AS policy ID.

Request

None

Example Request

This example queries the details about the AS policy with ID **fd7d63ce-8f5c-443e-b9a0-bef9386b23b3**.

```
GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_policy/fd7d63ce-8f5c-443e-b9a0-
bef9386b23b3
```

Response

Table 5-116 Response parameters

Parameter	Type	Description
scaling_policy	**scaling_polic y** object	Specifies details about the AS policy. For details, see **Table 5-117**.

Table 5-117 scaling_policy field description

Parameter	Type	Description
scaling_group_id	String	Specifies the AS group ID.
scaling_policy_nam e	String	Specifies the AS policy name. Supports fuzzy search.
scaling_policy_id	String	Specifies the AS policy ID.
policy_status	String	Specifies the AS policy status. ● **INSERVICE**: The AS policy is enabled. ● **PAUSED**: The AS policy is disabled. ● **EXECUTING**: The AS policy is being executed.
scaling_policy_type	String	Specifies the AS policy type. ● **ALARM**: indicates that the scaling action is triggered by an alarm. A value is returned for **alarm_id**, and no value is returned for **scheduled_policy**. ● **SCHEDULED**: indicates that the scaling action is triggered as scheduled. A value is returned for **scheduled_policy**, and no value is returned for **alarm_id**, **recurrence_type**, **recurrence_value**, **start_time**, or **end_time**. ● **RECURRENCE**: indicates that the scaling action is triggered periodically. Values are returned for **scheduled_policy**, **recurrence_type**, **recurrence_value**, **start_time**, and **end_time**, and no value is returned for **alarm_id**.
alarm_id	String	Specifies the alarm ID.
scheduled_policy	**scheduled_p olicy** object	Specifies the periodic or scheduled AS policy. For details, see **Table 5-118**.

Parameter	Type	Description
scaling_policy_action	**scaling_policy_action** object	Specifies the scaling action of the AS policy. For details, see **Table 5-119**.
cool_down_time	Integer	Specifies the cooldown period (s).
create_time	String	Specifies the time when an AS policy was created. The time format complies with UTC.

Table 5-118 scheduled_policy field description

Parameter	Type	Description
launch_time	String	Specifies the time when the scaling action is triggered. The time format complies with UTC. ● If **scaling_policy_type** is set to **SCHEDULED**, the time format is **YYYY-MM-DDThh:mmZ**. ● If **scaling_policy_type** is set to **RECURRENCE**, the time format is **hh:mm**.
recurrence_type	String	Specifies the type of a periodically triggered scaling action. ● **Daily**: indicates that the scaling action is triggered once a day. ● **Weekly**: indicates that the scaling action is triggered once a week. ● **Monthly**: indicates that the scaling action is triggered once a month.
recurrence_value	String	Specifies the frequency at which scaling actions are triggered. ● If **recurrence_type** is set to **Daily**, the value is **null**, indicating that the scaling action is triggered once a day. ● If **recurrence_type** is set to **Weekly**, the value ranges from **1** (Sunday) to **7** (Saturday). The digits refer to dates in each week and separated by a comma, such as **1,3,5**. ● If **recurrence_type** is set to **Monthly**, the value ranges from **1** to **31**. The digits refer to the dates in each month and separated by a comma, such as **1,10,13,28**.

Parameter	Type	Description
start_time	String	Specifies the start time of the scaling action triggered periodically. The time format complies with UTC. The time format is **YYYY-MM-DDThh:mmZ**.
end_time	String	Specifies the end time of the scaling action triggered periodically. The time format complies with UTC. The time format is **YYYY-MM-DDThh:mmZ**.

Table 5-119 scaling_policy_action field description

Parameter	Type	Description
operation	String	Specifies the scaling action. ● **ADD**: adds specified number of instances to the AS group. ● **REMOVE**: removes specified number of instances from the AS group. ● **SET**: sets the number of instances in the AS group.
instance_number	Integer	Specifies the number of instances to be operated.
instance_percentage	Integer	Specifies the percentage of instances to be operated.

Example Response

```
{
    "scaling_policy": {
        "scaling_policy_id": "fd7d63ce-8f5c-443e-b9a0-bef9386b23b3",
        "scaling_group_id": "e5d27f5c-dd76-4a61-b4bc-a67c5686719a",
"scaling_policy_name": "Scheduled 1",
        "scaling_policy_type": "SCHEDULED",
        "scheduled_policy": {
            "launch_time": "2015-07-24T01:21Z"
        },
        "cool_down_time": 300,
        "scaling_policy_action": {
            "operation": "REMOVE",
            "instance_number": 1
        },
        "policy_status": "INSERVICE",
        "create_time": "2015-07-24T01:09:30Z"
    }
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.9 Querying an AS Policy (V2)

Function

This API is used to query details about a specified AS policy by policy ID.

The difference between the V2 and V1 APIs for querying details of an AS policy is that V2 contains scaling resource types in response messages.

URI

GET /autoscaling-api/v2/{project_id}/scaling_policy/{scaling_policy_id}

Table 5-120 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_policy_id	Yes	String	Specifies the AS policy ID.

Request

None

Example Request

This example queries the details about the AS policy with ID **906f73ff-56e8-41b2-a005-8157d0c60361**.

```
GET https://{Endpoint}/autoscaling-api/v2/{project_id}/scaling_policy/906f73ff-56e8-41b2-
a005-8157d0c60361
```

Response

Table 5-121 Response parameters

Parameter	Type	Description
scaling_policy	**scaling_policy** object	Specifies details about the AS policy. For details, see **Table 5-122**.

Table 5-122 scaling_policy field description

Parameter	Type	Description
scaling_resource_id	String	Specifies the scaling resource ID.

Parameter	Type	Description
scaling_resource_type	String	Specifies the scaling resource type. ● AS group: **SCALING_GROUP** ● Bandwidth: **BANDWIDTH**
scaling_policy_name	String	Specifies the AS policy name. Supports fuzzy search.
scaling_policy_id	String	Specifies the AS policy ID.
policy_status	String	Specifies the AS policy status. ● **INSERVICE**: The AS policy is enabled. ● **PAUSED**: The AS policy is disabled. ● **EXECUTING**: The AS policy is being executed.
scaling_policy_type	String	Specifies the AS policy type. ● **ALARM**: indicates that the scaling action is triggered by an alarm. A value is returned for **alarm_id**, and no value is returned for **scheduled_policy**. ● **SCHEDULED**: indicates that the scaling action is triggered as scheduled. A value is returned for **scheduled_policy**, and no value is returned for **alarm_id**, **recurrence_type**, **recurrence_value**, **start_time**, or **end_time**. ● **RECURRENCE**: indicates that the scaling action is triggered periodically. Values are returned for **scheduled_policy**, **recurrence_type**, **recurrence_value**, **start_time**, and **end_time**, and no value is returned for **alarm_id**. ● **INTERVAL_ALARM**: indicates that the scaling action is triggered by a refined scaling policy. A value is returned for **alarm_id**, and no value is returned for **scheduled_policy**.
alarm_id	String	Specifies the alarm ID.
scheduled_policy	**scheduled_policy** object	Specifies the periodic or scheduled AS policy. For details, see **Table 5-123**.
scaling_policy_action	**scaling_policy_action** object	Specifies the scaling action of the AS policy. For details, see **Table 5-124**.

Parameter	Type	Description
interval_alarm_actions	Array of **interval_alarm_actions** objects	Specifies the scaling action applied when **scaling_policy_type** is set to **INTERVAL_ALARM**. For details, see **Table 5-125**.
cool_down_time	Integer	Specifies the cooldown period (s).
create_time	String	Specifies the time when an AS policy was created. The time format complies with UTC.
meta_data	**meta_data** object	Provides additional information. For details, see **Table 5-126**.
description	String	Specifies the AS policy description.

Table 5-123 scheduled_policy field description

Parameter	Type	Description
launch_time	String	Specifies the time when the scaling action is triggered. The time format complies with UTC. • If **scaling_policy_type** is set to **SCHEDULED**, the time format is **YYYY-MM-DDThh:mmZ**. • If **scaling_policy_type** is set to **RECURRENCE**, the time format is **hh:mm**.
recurrence_type	String	Specifies the type of a periodically triggered scaling action. • **Daily**: indicates that the scaling action is triggered once a day. • **Weekly**: indicates that the scaling action is triggered once a week. • **Monthly**: indicates that the scaling action is triggered once a month.

Parameter	Type	Description
recurrence_value	String	Specifies the frequency at which scaling actions are triggered. ● If **recurrence_type** is set to **Daily**, the value is **null**, indicating that the scaling action is triggered once a day. ● If **recurrence_type** is set to **Weekly**, the value ranges from **1** (Sunday) to **7** (Saturday). The digits refer to dates in each week and separated by a comma, such as **1,3,5**. ● If **recurrence_type** is set to **Monthly**, the value ranges from **1** to **31**. The digits refer to the dates in each month and separated by a comma, such as **1,10,13,28**.
start_time	String	Specifies the start time of the scaling action triggered periodically. The time format complies with UTC. The time format is **YYYY-MM-DDThh:mmZ**.
end_time	String	Specifies the end time of the scaling action triggered periodically. The time format complies with UTC. The time format is **YYYY-MM-DDThh:mmZ**.

Table 5-124 **scaling_policy_action** field description

Parameter	Type	Description
operation	String	Specifies the scaling action. ● **ADD**: indicates adding instances. ● **REDUCE**: indicates reducing instances. ● **SET**: indicates setting the number of instances to a specified value.
size	Integer	Specifies the operation size.
percentage	Integer	Specifies the percentage of instances to be operated.
limits	Integer	Specifies the operation restrictions.

Table 5-125 interval_alarm_actions field description

Parameter	Manda tory	Type	Description
lower_bound	No	double	Specifies the lower limit of the value range.
upper_bound	No	double	Specifies the upper limit of the value range.
operation	No	String	Specifies the operation to be performed. ● **ADD**: indicates adding instances. ● **REDUCE**: indicates reducing instances. ● **SET**: indicates setting the number of instances to a specified value.
size	No	Integer	Specifies the operation size.
percentage	No	Integer	Specifies the percentage of instances to be operated.
limits	No	Integer	Specifies the operation restrictions.

Table 5-126 meta_data field description

Parameter	Type	Description
metadata_bandwid th_share_type	String	Specifies the bandwidth sharing type in the bandwidth scaling policy.
metadata_eip_id	String	Specifies the EIP ID for the bandwidth in the bandwidth scaling policy.
metadata_eip_addr ess	String	Specifies the EIP for the bandwidth in the bandwidth scaling policy.

Example Response

```
{
    "scaling_policy": {
        "scaling_policy_id": "906f73ff-56e8-41b2-a005-8157d0c60361",
        "scaling_policy_name": "hth_aspolicy_1",
        "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
        "scaling_resource_type": "BANDWIDTH",
        "scaling_policy_type": "ALARM",
        "alarm_id": "al1513822380493GvlJKZwA8",
        "scheduled_policy": {
        },
        "cool_down_time": 900,
        "scaling_policy_action": {
            "operation": "ADD",
            "size": 1,
            "limits": 111
        },
        "policy_status": "INSERVICE",
```

```
        "create_time": "2018-03-21T08:03:35Z",
        "meta_data": {
            "metadata_eip_id": "263f0886-de6a-4e21-ad83-814ca9f3844e",
            "metadata_eip_address": "255.255.255.255"
        }
    }
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.10 Executing, Enabling, or Disabling an AS Policy

Function

This interface is used to immediately execute, enable, or disable a specified AS policy.

An AS policy can be executed only when the AS group and AS policy are in the **INSERVICE** state. Otherwise, the execution fails.

URI

POST /autoscaling-api/v1/{project_id}/scaling_policy/{scaling_policy_id}/action

Table 5-127 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_policy_id	Yes	String	Specifies the AS policy ID.

Request

Table 5-128 Request parameters

Parameter	Mandatory	Type	Description
action	Yes	String	Specifies the operation for an AS policy. ● **execute**: immediately executes the AS policy. ● **resume**: enables the AS group. ● **pause**: disables the AS group.

Example Request

This example executes the AS policy with ID **906f73ff-56e8-41b2-a005-8157d0c60361**.

```
POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_policy/906f73ff-56e8-41b2-
a005-8157d0c60361/action

{
```

```
    "action": "execute"
}
```

Response

None

Example Response

None

Returned Values

- Normal

    204

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.

Returned Value	Description
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.11 Deleting an AS Policy

Function

This interface is used to delete a specified AS policy.

URI

DELETE /autoscaling-api/v1/{project_id}/scaling_policy/{scaling_policy_id}

Table 5-129 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_policy_id	Yes	String	Specifies the AS policy ID.

Request

None

Example Request

This example deletes the AS policy with ID **906f73ff-56e8-41b2-a005-8157d0c60361**.

```
DELETE https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_policy/906f73ff-56e8-41b2-
a005-8157d0c60361
```

Response

None

Example Response

None

Returned Values

- Normal

  204

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.12 Batch Managing AS Policies

Function

This interface is used to enable, disable, or delete AS policies in batches.

- A batch operation can be performed on a maximum of 20 AS policies at a time.

URI

POST /autoscaling-api/v1/{project_id}/scaling_policies/action

Table 5-130 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.

Request

Table 5-131 Request parameters

Parameter	Mandatory	Type	Description
scaling_policy_id	Yes	Array of strings	Specifies the AS policy ID.
action	Yes	String	Specifies an action to be performed on AS policies in batches. The options are as follows: ● **delete**: deletes AS policies. ● **resume**: enables AS policies. ● **pause**: disables AS policies.
force_delete	No	String	Specifies whether to forcibly delete an AS policy. If the value is set to **no**, in-progress AS policies cannot be deleted. Options: ● **no** (default): indicates that the AS policy is not forcibly deleted. ● **yes**: indicates that the AS policy is forcibly deleted. This parameter is available only when **action** is set to **delete**.
delete_alarm	No	String	Specifies whether to delete the alarm rule used by the alarm policy. The value can be **yes** or **no** (default). This parameter is available only when **action** is set to **delete**.

Example Request

This example enables the AS policies with IDs **policy_id1** and **policy_id2** in a batch.

```
POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_policies/action

{
    "action": "resume",
    "scaling_policy_id": [
        "policy_id1",
        "policy_id2"
    ]
}
```

Response

None

Example Response

None

Returned Values

- Normal

  204

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.

Returned Value	Description
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.5 AS Policy Execution Logs

5.5.1 Querying AS Policy Execution Logs

Function

This API is used to query the historical records of AS policy execution based on search criteria. The results are displayed by page.

- Search criteria can be the log ID, AS resource type, AS resource ID, policy execution type, start time, end time, start line number, and number of records.

- If no search criteria are specified, a maximum of 20 AS policy execution logs can be queried by default.

URI

GET /autoscaling-api/v1/{project_id}/scaling_policy_execute_log/{scaling_policy_id}

☐ **NOTE**

You can type the question mark (?) and ampersand (&) at the end of the URI to define multiple search criteria. AS policy execution logs can be searched by all optional parameters in the following table. For details, see the example request.

Table 5-132 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_policy_id	Yes	String	Specifies the AS policy ID.

Parameter	Mandatory	Type	Description
log_id	No	String	Specifies the ID of an AS policy execution log.
scaling_resource_type	No	String	Specifies the scaling resource type. ● AS group: **SCALING_GROUP** ● Bandwidth: **BANDWIDTH**
scaling_resource_id	No	String	Specifies the scaling resource ID.
execute_type	No	String	Specifies the AS policy execution type. ● **SCHEDULED**: automatically triggered at a specified time point ● **RECURRENCE**: automatically triggered at a specified time period ● **ALARM**: alarm-triggered ● **MANUAL**: manually triggered ● **INTERVAL_ALARM**: automatically triggered by a refined scaling policy
start_time	No	String	Specifies the start time that complies with UTC for querying AS policy execution logs. The format of the start time is **yyyy-MM-ddThh:mm:ssZ**.
end_time	No	String	Specifies the end time that complies with UTC for querying AS policy execution logs. The format of the end time is **yyyy-MM-ddThh:mm:ssZ**.
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum parameter value is **0**.
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value range is 0 to 100.

Request

None

Example Request

This example queries the execution logs of the AS policy with ID **05545d3d-ccf9-4bca-ae4f-1e5e73ca0bf6**.

```
GET https://{Endpoint}/autoscaling-api/v1/edcb94a885a84ed3a3fdf8ea4d2741da/scaling_policy_execute_log/
05545d3d-ccf9-4bca-ae4f-1e5e73ca0bf6
```

Response

Table 5-133 Response parameters

Parameter	Type	Description
total_number	Integer	Specifies the total number of query records.
start_number	Integer	Specifies the start line number.
limit	Integer	Specifies the maximum number of resources to be queried.
scaling_policy_execute_log	Array of **scaling_policy_execute_log** objects	Specifies the AS policy execution logs. For details, see **Table 5-134**.

Table 5-134 scaling_policy_execute_log field description

Parameter	Type	Description
status	String	Specifies the AS policy execution status. ● **SUCCESS**: The AS policy has been executed. ● **FAIL**: Executing the AS policy failed. ● **EXECUTING**: The AS policy is being executed.
failed_reason	String	Specifies the AS policy execution failure.
execute_type	String	Specifies the AS policy execution type. ● **SCHEDULE**: automatically triggered at a specified time point ● **RECURRENCE**: automatically triggered at a specified time period ● **ALARM**: alarm-triggered ● **MANUAL**: manually triggered ● **INTERVAL_ALARM**: automatically triggered by a refined scaling policy
execute_time	String	Specifies the time when an AS policy was executed. The time format complies with UTC.
id	String	Specifies the ID of an AS policy execution log.

Parameter	Type	Description
tenant_id	String	Specifies the project ID.
scaling_policy_id	String	Specifies the AS policy ID.
scaling_resource_type	String	Specifies the scaling resource type. ● AS group: **SCALING_GROUP** ● Bandwidth: **BANDWIDTH**
scaling_resource_id	String	Specifies the scaling resource ID.
old_value	String	Specifies the source value.
desire_value	String	Specifies the target value.
limit_value	String	Specifies the operation restrictions. If **scaling_resource_type** is set to **BANDWIDTH** and **operation** is not **SET**, this parameter takes effect and the unit is Mbit/s. In this case: ● If **operation** is set to **ADD**, this parameter indicates the maximum bandwidth allowed. ● If **operation** is set to **REDUCE**, this parameter indicates the minimum bandwidth allowed.
type	String	Specifies the AS policy execution type. ● **ADD**: indicates adding instances. ● **REMOVE**: indicates reducing instances. ● **SET**: indicates setting the number of instances to a specified value.
job_records	Array of **job_records** objects	Specifies the tasks contained in a scaling action based on an AS policy. For details, see **Table 5-135**.
meta_data	**meta_data** object	Provides additional information. For details, see **Table 5-136**.

Table 5-135 **job_records** field description

Parameter	Type	Description
job_name	String	Specifies the task name.
record_type	String	Specifies the record type. ● **API**: API calling type ● **MEG**: message type

Parameter	Type	Description
record_time	String	Specifies the record time.
request	String	Specifies the request body. This parameter is valid only if **record_type** is set to **API**.
response	String	Specifies the response body. This parameter is valid only if **record_type** is set to **API**.
code	String	Specifies the returned code. This parameter is valid only if **record_type** is set to **API**.
message	String	Specifies the message. This parameter is valid only if **record_type** is set to **MEG**.
job_status	String	Specifies the execution status of the task. ● **SUCCESS**: The task is successfully executed. ● **FAIL**: The task failed to be executed.

Table 5-136 meta_data field description

Parameter	Type	Description
metadata_ba ndwidth_shar e_type	String	Specifies the bandwidth sharing type in the bandwidth scaling policy.
metadata_eip _id	String	Specifies the EIP ID for the bandwidth in the bandwidth scaling policy.
metadataeip_ address	String	Specifies the EIP for the bandwidth in the bandwidth scaling policy.

Example Response

```
{
"limit": 20,
"scaling_policy_execute_log": [
  {
    "id": "b86e4175-30cb-4b1e-a332-83f9ee472c58",
    "status": "SUCCESS",
    "type": "REMOVE",
    "tenant_id": "0428982a1b8039f42f01c005edde7c0d",
    "scaling_resource_type": "SCALING_GROUP",
    "scaling_resource_id": "1f2d3e73-7ef6-40b3-a8fa-514b68eccaa7",
    "scaling_policy_id": "05545d3d-ccf9-4bca-ae4f-1e5e73ca0bf6",
    "old_value": "1",
    "desire_value": "0",
    "limit_value": "0",
    "execute_time": "2019-03-18T16:00:00Z",
    "execute_type": "RECURRENCE",
    "job_records": [
      {
        "message": "modify desire number of scaling group",
        "job_name": "ADJUST_VM_NUMBERS",
        "record_type": "MEG",
```

```
        "record_time": "2019-03-18T16:00:00Z",
        "job_status": "SUCCESS"
      }
    ]
  }
},
"total_number": 1,
"start_number": 0
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Values	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.6 Scaling Action Logs

5.6.1 Querying Scaling Action Logs

Function

This API is used to query scaling action logs based on search criteria. The results are displayed by page.

- Search criteria can be the start time, end time, start line number, and number of records.

- If no search criteria are specified, a maximum of 20 scaling action logs can be queried by default.

URI

GET /autoscaling-api/v1/{project_id}/scaling_activity_log/{scaling_group_id}

📖 **NOTE**

You can type the question mark (?) and ampersand (&) at the end of the URI to define multiple search criteria. Scaling action logs can be searched by all optional parameters in the following table. For details, see the example request.

Table 5-137 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.
start_time	No	String	Specifies the start time that complies with UTC for querying scaling action logs. The format of the start time is **yyyy-MM-ddThh:mm:ssZ**.
end_time	No	String	Specifies the end time that complies with UTC for querying scaling action logs. The format of the end time is **yyyy-MM-ddThh:mm:ssZ**.
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum parameter value is **0**.

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value ranges from 0 to 100.

Request

None

Example Request

This example queries the scaling action logs of the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_activity_log/e5d27f5c-dd76-4a61-b4bc-a67c5686719a

Response

Table 5-138 Response parameters

Parameter	Type	Description
total_number	Integer	Specifies the total number of query records.
start_number	Integer	Specifies the start line number.
limit	Integer	Specifies the maximum number of resources to be queried.
scaling_activity_log	Array of **scaling_activity_log** objects	Specifies scaling action logs. For details, see **Table 5-139**.

Table 5-139 scaling_activity_log field description

Parameter	Type	Description
status	String	Specifies the status of the scaling action. ● **SUCCESS**: The scaling action has been performed. ● **FAIL**: Performing the scaling action failed. ● **DOING**: The scaling action is being performed.
start_time	String	Specifies the start time of the scaling action. The time format must comply with UTC.
end_time	String	Specifies the end time of the scaling action. The time format must comply with UTC.
id	String	Specifies the scaling action log ID.
instance_removed_list	String	Specifies the names of the instances removed from the AS group after the scaling action is complete. The instance names are separated using commas (,).
instance_deleted_list	String	Specifies the names of the instances removed and deleted from the AS group after the scaling action is complete. The instance names are separated using commas (,).
instance_added_list	String	Specifies the names of the instances added to the AS group after the scaling action is complete. The instance names are separated using commas (,).
scaling_value	Integer	Specifies the number of added or removed instances in the scaling action.
description	String	Specifies the description of the scaling action.
instance_value	Integer	Specifies the number of instances in the AS group.
desire_value	Integer	Specifies the expected number of instances for the scaling action.

Example Response

```
{
 "limit": 20,
 "scaling_activity_log": [
  {
    "id": "66e0f775-c4ac-4b52-9d5c-f93ba217aa5f",
    "instance_value": 1,
    "desire_value": 0,
    "scaling_value": 1,
    "start_time": "2019-03-18T16:00:11Z",
    "end_time": "2019-03-18T16:00:32Z",
    "instance_added_list": null,
    "instance_deleted_list": "as-config-bblh-ONQE551S",
    "instance_removed_list": null,
```

```
    "status": "SUCCESS",
    "description": "{\"reason\":[{\"change_reason\":\"RECURRENCE\",\"old_value\":1,\"scaling_policy_name
\":\"as-policy-bvfk\",\"change_time\":\"2019-03-18T16:00:00Z\",\"new_value\":0,\"scaling_policy_id
\":\"05545d3d-ccf9-4bca-ae4f-1e5e73ca0bf6\"}]}"
  },
  {
    "id": "c3a1fff6-84a3-4cbc-8ac0-e3b0f645ecd8",
    "instance_value": 0,
    "desire_value": 1,
    "scaling_value": 1,
    "start_time": "2019-03-16T10:21:11Z",
    "end_time": "2019-03-16T10:25:12Z",
    "instance_added_list": "as-config-bblh-ONQE551S",
    "instance_deleted_list": null,
    "instance_removed_list": null,
    "status": "SUCCESS",
    "description": "{\"reason\":[{\"change_reason\":\"DIFF\",\"old_value\":0,\"change_time
\":\"2019-03-16T10:21:11Z\",\"new_value\":1}]}"
  }],
  "total_number": 2,
  "start_number": 0
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.

Returned Value	Description
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.6.2 Querying Scaling Action Logs (V2)

Function

This API is used to query scaling action logs based on search criteria. The scaling actions include increasing instances, setting instances to the standby mode, and migrating instances to balance load. The results are displayed by page.

- The difference between the V2 and V1 APIs for querying scaling action logs is that V2 displays more detailed action logs, such as ELB migration logs and instance standby logs.

- Search criteria can be the start time, end time, start line number, number of records, and scaling action type.

- If no search criteria are specified, a maximum of 20 scaling action logs can be queried by default.

URI

GET /autoscaling-api/v2/{project_id}/scaling_activity_log/{scaling_group_id}

📖 NOTE

You can type the question mark (?) and ampersand (&) at the end of the URI to define multiple search criteria. Scaling action logs can be searched by all optional parameters in the following table. For details, see the example request.

Table 5-140 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.

Parameter	Mandatory	Type	Description
scaling_group_id	Yes	String	Specifies the AS group ID.
log_id	No	String	Specifies the scaling action log ID.
start_time	No	String	Specifies the start time that complies with UTC for querying scaling action logs. The format of the start time is **yyyy-MM-ddThh:mm:ssZ**.
end_time	No	String	Specifies the end time that complies with UTC for querying scaling action logs. The format of the end time is **yyyy-MM-ddThh:mm:ssZ**.
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum parameter value is **0**.
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value ranges from 0 to 100.

Parameter	Mandatory	Type	Description
type	No	String	Specifies the types of the scaling actions to be queried. Different types are separated by commas (,). ● **NORMAL**: indicates a common scaling action. ● **MANUAL_REMOVE**: indicates manually removing instances from an AS group. ● **MANUAL_DELETE**: indicates manually removing and deleting instances from an AS group. ● **MANUAL_ADD**: indicates manually adding instances to an AS group. ● **ELB_CHECK_DELETE**: indicates that instances are removed from an AS group and deleted based on the ELB health check result. ● **AUDIT_CHECK_DELETE**: indicates that instances are removed from an AS group and deleted based on the audit. ● **DIFF**: indicates that the number of expected instances is different from the actual number of instances. ● **MODIFY_ELB**: indicates the load balancer migration. ● **ENTER_STANDBY**: indicates setting instances to standby mode. ● **EXIT_STANDBY**: indicates canceling standby mode for instances.
status	No	String	Specifies the status of the scaling action. ● **SUCCESS**: The scaling action has been performed. ● **FAIL**: Performing the scaling action failed. ● **DOING**: The scaling action is being performed.

Request

None

Example Request

This example queries the scaling action logs of the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**. The start time is 2018-11-22T00:00:00Z, and the end time is 2018-11-22T14:00:00Z.

```
GET https://{Endpoint}/autoscaling-api/v2/{project_id}/scaling_activity_log/e5d27f5c-dd76-4a61-b4bc-
a67c5686719a?start_time=2018-11-22T00:00:00Z&end_time=2018-11-22T14:00:00Z
```

Response

Table 5-141 Response parameters

Parameter	Type	Description
total_number	Integer	Specifies the total number of query records.
start_number	Integer	Specifies the start line number.
limit	Integer	Specifies the maximum number of resources to be queried.
scaling_activity_log	Array of **scaling_activity_log** objects	Specifies scaling action logs. For details, see **Table 5-142**.

Table 5-142 scaling_activity_log field description

Parameter	Type	Description
status	String	Specifies the status of the scaling action. • **SUCCESS**: The scaling action has been performed. • **FAIL**: Performing the scaling action failed. • **DOING**: The scaling action is being performed.
start_time	String	Specifies the start time of the scaling action. The time format must comply with UTC.
end_time	String	Specifies the end time of the scaling action. The time format must comply with UTC.
id	String	Specifies the scaling action log ID.

Parameter	Type	Description
instance_removed_list	Array of **scaling_instance** objects	Specifies names of the ECSs that are removed from the AS group in a scaling action. For details, see **Table 5-143**.
instance_deleted_list	Array of **scaling_instance** objects	Specifies names of the ECSs that are removed from the AS group and deleted in a scaling action. For details, see **Table 5-143**.
instance_added_list	Array of **scaling_instance** objects	Specifies names of the ECSs that are added to the AS group in a scaling action. For details, see **Table 5-143**.
instance_failed_list	Array of **scaling_instance** objects	Specifies the ECSs for which a scaling action fails. For details, see **Table 5-143**.
instance_standby_list	Array of **scaling_instance** objects	Specifies the ECSs that are set to standby mode or for which standby mode is canceled in a scaling action. For details, see **Table 5-143**.
scaling_value	Integer	Specifies the number of added or deleted instances during the scaling.
description	String	Specifies the description of the scaling action.
instance_value	Integer	Specifies the number of instances in the AS group.
desire_value	Integer	Specifies the expected number of instances for the scaling action.
lb_bind_success_list	Array of **modify_lb** objects	Specifies the load balancers that are bound to the AS group. For details, see **Table 5-144**.
lb_bind_failed_list	Array of **modify_lb** objects	Specifies the load balancers that failed to be bound to the AS group. For details, see **Table 5-144**.
lb_unbind_success_list	Array of **modify_lb** objects	Specifies the load balancers that are unbound from the AS group. For details, see **Table 5-144**.
lb_unbind_failed_list	Array of **modify_lb** objects	Specifies the load balancers that failed to be unbound from the AS group. For details, see **Table 5-144**.
type	String	Specifies the type of the scaling action.

Table 5-143 scaling_instance field description

Parameter	Type	Description
instance_name	String	Specifies the ECS name.
instance_id	String	Specifies the ECS ID.
failed_reason	String	Specifies the cause of the instance scaling failure.
failed_details	String	Specifies details of the instance scaling failure.
instance_config	String	Specifies the information about instance configurations.

Table 5-144 modify_lb field description

Parameter	Type	Description
lbaas_listener	**lbaas_ listener** object	Specifies information about an enhanced load balancer. For details, see **Table 5-145**.
listener	String	Specifies information about a classic load balancer.
failed_reason	String	Specifies the cause of a load balancer migration failure.
failed_details	String	Specifies the details of a load balancer migration failure.

Table 5-145 lbaas_listener field description

Parameter	Type	Description
listener_id	String	Specifies the listener ID.
pool_id	String	Specifies the backend ECS group ID.
protocol_port	Integer	Specifies the backend protocol port, which is the port on which a backend ECS listens for traffic.
weight	Integer	Specifies the weight, which determines the portion of requests a backend ECS processes when being compared to other backend ECSs added to the same listener.

Example Response

```
{
    "limit": 20,
    "scaling_activity_log": [
    {
      "id": "8753a18c-931d-4cb8-8d49-6c99396af348",
      "instance_value": 0,
      "desire_value": 0,
      "scaling_value": 0,
      "start_time": "2018-11-22T13:46:20Z",
      "end_time": "2018-11-22T13:47:38Z",
      "status": "SUCCESS",
      "lb_bind_success_list": [
        {
          "lbaas_listener": {
            "weight": 1,
            "listener_id": null,
            "pool_id": "0f0a9dd8-2e1d-4432-8ca2-49adc75aa662",
            "protocol_port": 82
          }
        }
      ],
      "lb_bind_failed_list": [],
      "lb_unbind_success_list": [],
      "lb_unbind_failed_list": [],
      "type": "MODIFY_ELB"
    },
    {
      "id": "44152cf2-a005-4507-b6e9-66a2a64eff52",
      "instance_value": 0,
      "desire_value": 1,
      "scaling_value": 1,
      "start_time": "2018-11-22T13:44:22Z",
      "end_time": "2018-11-22T13:46:02Z",
      "instance_added_list": [
        {
          "instance_id": "8e273bac-d303-46dc-9883-628be2294bdf",
          "instance_name": "as-config-t66a_9W8L9SSK"
        }
      ],
      "instance_deleted_list": [],
      "instance_removed_list": [],
      "instance_failed_list": [],
      "status": "SUCCESS",
      "description": "{\"reason\":[{\"change_reason\":\"MANNUAL\",\"old_value\":0,\"change_time
\":\"2018-11-22T13:44:19Z\",\"new_value\":1}]}",
      "type": "NORMAL"
    }
  ],
    "total_number": 2,
    "start_number": 0
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.

Returned Value	Description
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.7 Quotas

5.7.1 Querying AS Quotas

Function

This API is used to query the total quotas and used quotas of AS groups, AS configurations, bandwidth scaling policies, AS policies, and instances for a specified tenant.

URI

GET /autoscaling-api/v1/{project_id}/quotas

Table 5-146 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.

Request

None

Example Request

This example queries the total quotas and used quotas of AS groups, AS configurations, bandwidth scaling policies, AS policies, and instances for a specified tenant.

GET https://{Endpoint}/autoscaling-api/v1/{project_id}/quotas

Response

Table 5-147 Response parameters

Parameter	Type	Description
quotas	**quotas** object	Specifies quota details. For details, see **Table 5-148**.

Table 5-148 quotas field description

Parameter	Type	Description
resources	Array of **resources** objects	Specifies resources. For details, see **Table 5-149**.

Table 5-149 resources field description

Parameter	Type	Description
type	String	Specifies the quota type. • **scaling_Group**: AS group quota • **scaling_Config**: AS configuration quota • **scaling_Policy**: AS policy quota • **scaling_Instance**: instance quota • **bandwidth_scaling_policy**: bandwidth scaling policy quota.

Parameter	Type	Description
used	Integer	Specifies the used amount of the quota. When **type** is set to **scaling_Policy** or **scaling_Instance**, this parameter is reserved, and the system returns **-1** as the parameter value. You can query the used quota of AS policies and AS instances in a specified AS group. For details, see **Querying AS Policy and Instance Quotas**.
quota	Integer	Specifies the total quota.
max	Integer	Specifies the quota upper limit.
min	Integer	Specifies the quota lower limit.

Example Response

```json
{
    "quotas": {
        "resources": [
            {
                "type": "scaling_Group",
                "used": 2,
                "quota": 25,
                "max": 50,
                "min": 0
            },
            {
                "type": "scaling_Config",
                "used": 3,
                "quota": 100,
                "max": 200,
                "min": 0
            },
            {
                "type": "scaling_Policy",
                "used": -1,
                "quota": 50,
                "max": 50,
                "min": 0
            },
            {
                "type": "scaling_Instance",
                "used": -1,
                "quota": 200,
                "max": 1000,
                "min": 0
            },
            {
                "type": "bandwidth_scaling_policy",
                "used": 1,
                "quota": 10,
                "max": 100,
                "min": 0
            }
        ]
    }
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.7.2 Querying AS Policy and Instance Quotas

Function

This interface is used to query the total quotas and used quotas of AS policies and instances of a specified AS group by group ID.

URI

GET /autoscaling-api/v1/{project_id}/quotas/{scaling_group_id}

Table 5-150 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.

Request

None

Example Request

This example queries the total quotas and used quotas of the AS policies and instances in the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

GET https://{Endpoint}/autoscaling-api/v1/{project_id}/quotas/e5d27f5c-dd76-4a61-b4bc-a67c5686719a

Response

Table 5-151 Response parameters

Parameter	Type	Description
quotas	**quotas** object	Specifies quota details. For details, see **Table 5-152**.

Table 5-152 quotas field description

Parameter	Type	Description
resources	Array of **resources** objects	Specifies resources. For details, see **Table 5-153**.

Table 5-153 resources field description

Parameter	Type	Description
type	String	Specifies the quota type. ● **scaling_Policy**: indicates AS policies. ● **scaling_Instance**: indicates instances.
used	Integer	Specifies the used quota.
quota	Integer	Specifies the total quota.
max	Integer	Specifies the quota upper limit.
min	Integer	Specifies the quota lower limit.

Example Response

```
{
    "quotas": {
        "resources": [
            {
                "type": "scaling_Policy",
                "used": 2,
                "quota": 50,
                "max": 50,
                "min": 0
            },
            {
                "type": "scaling_Instance",
                "used": 0,
                "quota": 200,
                "max": 1000,
                "min": 0
            }
        ]
    }
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.

Returned Value	Description
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.8 Notifications

5.8.1 Enabling Notification for an AS Group

Function

This API is used to enable notification for an AS group. Each time this API is called, the AS group adds a notification topic and scenario. Each AS group supports up to five topics. The notification topic is pre-configured and subscribed by you in SMN. When the live network complies with the notification scenario that matches the notification topic, the AS group sends a notification to your subscription endpoints.

URI

PUT /autoscaling-api/v1/{project_id}/scaling_notification/{scaling_group_id}

Table 5-154 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.

Request

Table 5-155 Request parameters

Parameter	Mandatory	Type	Description
topic_urn	Yes	String	Specifies a unique topic in SMN.
topic_scene	Yes	Array of strings	Specifies a notification scenario, which can be one of the following: ● **SCALING_UP**: indicates that the capacity is expanded. ● **SCALING_UP_FAIL**: indicates that the capacity expansion failed. ● **SCALING_DOWN**: indicates that the capacity is reduced. ● **SCALING_DOWN_FAIL**: indicates that the capacity reduction failed. ● **SCALING_GROUP_ABNORMAL**: indicates that an exception has occurred in the AS group.

Example Request

This example enables notifications with topic_urn
urn:smn:*regionId*:b53e5554fad0494d96206fb84296510b:gsh for the AS group
with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**. After the configuration is
complete, a notification will be sent when capacity expansion succeeds or fails,
capacity reduction succeeds or fails, or an error occurs in the AS group.

```
PUT https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_notification/e5d27f5c-dd76-4a61-b4bc-
a67c5686719a

{
```

```
    "topic_urn": "urn:smn:regionId:b53e5554fad0494d96206fb84296510b:gsh",
    "topic_scene": [

"SCALING_UP","SCALING_UP_FAIL","SCALING_DOWN","SCALING_DOWN_FAIL","SCALING_GROUP_ABNOR
MAL"
    ]
}
```

Response

Table 5-156 Response parameters

Parameter	Type	Description
topic_urn	String	Specifies a unique topic in SMN.
topic_scene	Array of strings	Specifies a notification scenario, which can be one of the following: • **SCALING_UP**: indicates that the capacity is expanded. • **SCALING_UP_FAIL**: indicates that the capacity expansion failed. • **SCALING_DOWN**: indicates that the capacity is reduced. • **SCALING_DOWN_FAIL**: indicates that the capacity reduction failed. • **SCALING_GROUP_ABNORMAL**: indicates that an exception has occurred in the AS group.
topic_name	String	Specifies the topic name in SMN.

Example Response

```
{
    "topic_urn": "urn:smn:regionId:b53e5554fad0494d96206fb84296510b:gsh",
    "topic_scene": [

"SCALING_UP","SCALING_UP_FAIL","SCALING_DOWN","SCALING_DOWN_FAIL","SCALING_GROUP_ABNOR
MAL"
    ],
    "topic_name": "gsh"
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.

Returned Value	Description
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.8.2 Querying an AS Group Notification List

Function

This API is used to query an AS group notification list by group ID.

URI

GET /autoscaling-api/v1/{project_id}/scaling_notification/{scaling_group_id}

Table 5-157 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.

Request

None

Example Request

This example queries the notifications of the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

```
GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_notification/e5d27f5c-dd76-4a61-b4bc-a67c5686719a
```

Response

Table 5-158 Response parameters

Parameter	Type	Description
topics	Array of **topics** objects	Specifies the AS group notification list.

Table 5-159 topics field description

Parameter	Type	Description
topic_urn	String	Specifies a unique topic in SMN.
topic_scene	Array of strings	Specifies a notification scenario, which can be one of the following: ● **SCALING_UP**: indicates that the capacity is expanded. ● **SCALING_UP_FAIL**: indicates that the capacity expansion failed. ● **SCALING_DOWN**: indicates that the capacity is reduced. ● **SCALING_DOWN_FAIL**: indicates that the capacity reduction failed. ● **SCALING_GROUP_ABNORMAL**: indicates that an exception has occurred in the AS group.

Parameter	Type	Description
topic_name	String	Specifies the topic name in SMN.

Example Response

```
{
    "topics":[
        {
        "topic_name": "gsh",
        "topic_urn": "urn:smn:regionId:b53e5554fad0494d96206fb84296510b:gsh",
        "topic_scene": [

"SCALING_UP","SCALING_UP_FAIL","SCALING_DOWN","SCALING_DOWN_FAIL","SCALING_GROUP_ABNOR
MAL"
        ]},
        {
        "topic_name": "asdf",
        "topic_urn": "urn:smn:regionId:b53e5554fad0494d96206fb84296510b:asdf",
        "topic_scene": [
            "SCALING_UP","SCALING_UP_FAIL"
        ]}
    ]
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.

Returned Value	Description
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.8.3 Deleting a Notification for an AS Group

Function

This interface is used to delete a notification for a specified AS group.

URI

DELETE /autoscaling-api/v1/{project_id}/scaling_notification/{scaling_group_id}/{topic_urn}

Table 5-160 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.
topic_urn	Yes	String	Specifies a unique topic in SMN.

Request

None

Example Request

This example deletes notifications with topic_urn **urn:smn:**_regionId_**:b53e5554fad0494d96206fb84296510b:gsh** in the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

DELETE https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_notification/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/urn:smn:*regionId*:b53e5554fad0494d96206fb84296510b:gsh

Response

None

Example Response

None

Returned Values

- Normal

  204

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.

Returned Value	Description
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.9 Lifecycle Hooks

5.9.1 Creating a Lifecycle Hook

Function

This interface is used to create a lifecycle hook for an AS group. Up to five lifecycle hooks can be created for one AS group.

- After the creation, when the AS group is resized, the lifecycle hook suspends the involved instance and puts it to a **Wait (Adding to AS group)** or **Wait (Removing from AS group)** status. This status is retained until the timeout duration ends or you manually perform a callback.

- During the instance waiting duration, you can perform customized operations. For example, you can install or configure software on a newly started instance, or download the log file from the instance before the instance terminates.

URI

POST /autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}

Table 5-161 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.

Request

Table 5-162 Request parameters

Parameter	Mandatory	Type	Description
lifecycle_hook_name	Yes	String	Specifies the lifecycle hook name. The name contains only letters, digits, underscores (_), and hyphens (-), and cannot exceed 32 characters.
lifecycle_hook_type	Yes	String	Specifies the lifecycle hook type. Options: ● **INSTANCE_TERMINATING**: The hook suspends the instance when the instance is terminated. ● **INSTANCE_LAUNCHING**: The hook suspends the instance when the instance is started.
default_result	No	String	Specifies the default lifecycle hook callback operation. By default, this operation is performed when the timeout duration expires. ● ABANDON ● CONTINUE **NOTE** ● If an instance is starting, **CONTINUE** indicates that your customized operations are successful and the instance can be used. **ABANDON** indicates that your customized operations failed, and the instance will be terminated. In such a case, the scaling action fails, and you must create a new instance. ● If an instance is stopping, both **ABANDON** and **CONTINUE** allow instance termination. The difference between the two states is as follows: **ABANDON** stops other lifecycle hooks, but **CONTINUE** allows the completion of other lifecycle hooks. ● The default value of this parameter is **ABANDON**.

Parameter	Mandatory	Type	Description
default_time out	No	Integer	Specifies the lifecycle hook timeout duration, which ranges from 60 to 86400 in the unit of second. The default value is 3600. By default, this parameter specifies the instance waiting duration. You can prolong the timeout duration or perform the **CONTINUE** or **ABANDON** operation before the timeout duration expires.
notification_t opic_urn	Yes	String	Specifies a unique topic in SMN. This parameter specifies a notification object for a lifecycle hook. When an instance is suspended by the lifecycle hook, the SMN service sends a notification to the object. This notification contains the basic instance information, your customized notification content, and the token for controlling lifecycle operations.
notification_ metadata	No	String	Specifies a customized notification, which contains no more than 256 characters in length. The message cannot contain the following characters: <>&'() After a notification object is configured, the SMN service sends your customized notification to the object.

Example Request

This example creates the lifecycle hook named **test-hook1** in the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**. The configuration is as follows: The callback operation is **ABANDON**, the timeout duration is **3600 seconds**; the notification topic_urn is **urn:smn:**$regionId$**:b53e5554fad0494d96206fb84296510b:gsh**, the hook suspends the instance when the instance is started.

```
POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/e5d27f5c-dd76-4a61-b4bc-
a67c5686719a

{
    "lifecycle_hook_name": "test-hook1",
```

```
  "default_result": "ABANDON",
  "default_timeout": 3600,
  "notification_topic_urn": "urn:smn:regionId:b53e5554fad0494d96206fb84296510b:gsh",
  "lifecycle_hook_type": "INSTANCE_LAUNCHING"
}
```

Response

Table 5-163 Response parameters

Parameter	Type	Description
lifecycle_hook_name	String	Specifies the lifecycle hook name.
lifecycle_hook_type	String	Specifies the lifecycle hook type. • INSTANCE_TERMINATING • INSTANCE_LAUNCHING
default_result	String	Specifies the default lifecycle hook callback operation. • ABANDON • CONTINUE
default_timeout	Integer	Specifies the lifecycle hook timeout duration in the unit of second.
notification_topic_urn	String	Specifies a unique topic in SMN.
notification_topic_name	String	Specifies the topic name in SMN.
notification_metadata	String	Specifies the notification message.
create_time	String	Specifies the UTC-compliant time when the lifecycle hook is created.

Example Response

```
{
  "lifecycle_hook_name": "test-hook1",
  "default_result": "ABANDON",
  "default_timeout": 3600,
  "notification_topic_urn": "urn:smn:regionId:b53e5554fad0494d96206fb84296510b:gsh",
  "notification_topic_name": "gsh",
  "lifecycle_hook_type": "INSTANCE_LAUNCHING",
  "notification_metadata": null,
  "create_time": "2019-03-18T16:00:11Z"
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.9.2 Querying Lifecycle Hooks

Function

This interface is used to query lifecycle hooks by AS group ID.

URI

GET /autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}/list

Table 5-164 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.

Request

None

Example Request

This example queries the lifecycle hooks of the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/list

Response

Table 5-165 Response parameters

Parameter	Type	Description
lifecycle_hooks	Array of **lifecycle_ hooks** objects	Specifies lifecycle hooks. For details, see **Table 5-166**.

Table 5-166 lifecycle_hooks field description

Parameter	Type	Description
lifecycle_hook_ name	String	Specifies the lifecycle hook name.
lifecycle_hook_t ype	String	Specifies the lifecycle hook type. • INSTANCE_TERMINATING • INSTANCE_LAUNCHING
default_result	String	Specifies the default lifecycle hook callback operation. • ABANDON • CONTINUE

Parameter	Type	Description
default_timeout	Integer	Specifies the lifecycle hook timeout duration in the unit of second.
notification_topic_urn	String	Specifies a unique topic in SMN.
notification_topic_name	String	Specifies the topic name in SMN.
notification_metadata	String	Specifies the customized notification.
create_time	String	Specifies the time when the lifecycle hook is created. The time is UTC-compliant.

Example Response

```
{
    "lifecycle_hooks": [
        {
            "lifecycle_hook_name": "test-hook1",
            "default_result": "ABANDON",
            "default_timeout": 3600,
            "notification_topic_urn": "urn:smn:regionId:b53e5554fad0494d96206fb84296510b:gsh",
            "notification_topic_name": "gsh",
            "lifecycle_hook_type": "INSTANCE_LAUNCHING",
            "notification_metadata": null,
            "create_time": "2016-11-18T04:01:34Z"
        },
        {
            "lifecycle_hook_name": "test-hook2",
            "default_result": "CONTINUE",
            "default_timeout": 300,
            "notification_topic_urn": "urn:smn:regionId:a5b95554fad0494d94596fb84296510b:test",
            "notification_topic_name": "test",
            "lifecycle_hook_type": "INSTANCE_TERMINATING",
            "notification_metadata": null,
            "create_time": "2016-11-17T04:00:34Z"
        }
    ]
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.

Returned Value	Description
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.9.3 Querying a Lifecycle Hook

Function

This interface is used to query details about a specified lifecycle hook by AS group ID and lifecycle hook name.

URI

GET /autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}/{lifecycle_hook_name}

Table 5-167 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.
lifecycle_hook_name	Yes	String	Specifies the lifecycle hook name.

Request

None

Example Request

This example queries the details about the lifecycle hook named **test-hook1** of the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

```
GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/test-hook1
```

Response

Table 5-168 Response parameters

Parameter	Type	Description
lifecycle_hook_name	String	Specifies the lifecycle hook name.
lifecycle_hook_type	String	Specifies the lifecycle hook type. ● INSTANCE_TERMINATING ● INSTANCE_LAUNCHING
default_result	String	Specifies the default lifecycle hook callback operation. ● ABANDON ● CONTINUE
default_timeout	Integer	Specifies the lifecycle hook timeout duration in the unit of second.
notification_topic_urn	String	Specifies a unique topic in SMN.
notification_topic_name	String	Specifies the topic name in SMN.
notification_metadata	String	Specifies the customized notification.

Parameter	Type	Description
create_time	String	Specifies the time when the lifecycle hook is created. The time is UTC-compliant.

Example Response

```
{
    "lifecycle_hook_name": "test-hook1",
    "default_result": "CONTINUE",
    "default_timeout": 3600,
    "notification_topic_urn": "urn:smn:regionId:b53e5554fad0494d96206fb84296510b:gsh",
    "notification_topic_name": "gsh",
    "lifecycle_hook_type": "INSTANCE_LAUNCHING",
    "notification_metadata": null,
    "create_time": "2016-11-18T04:01:34Z"
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.

Returned Value	Description
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.9.4 Modifying a Lifecycle Hook

Function

This interface is used to modify the information about a specified lifecycle hook.

URI

PUT /autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}/{lifecycle_hook_name}

Table 5-169 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.
lifecycle_hook_name	Yes	String	Specifies the lifecycle hook name.

Request

Table 5-170 Request parameters

Parameter	Mandatory	Type	Description
lifecycle_hook_type	No	String	Specifies the lifecycle hook type. Options: ● **INSTANCE_TERMINATING**: The hook suspends the instance when the instance is terminated. ● **INSTANCE_LAUNCHING**: The hook suspends the instance when the instance is started.
default_result	No	String	Specifies the default lifecycle hook callback operation. By default, this operation is performed when the timeout duration expires. ● ABANDON ● CONTINUE **NOTE** ● If an instance is starting, **CONTINUE** indicates that your customized operations are successful and the instance can be used. **ABANDON** indicates that your customized operations failed, and the instance will be terminated. In such a case, the scaling action fails, and you must create a new instance. ● If an instance is stopping, both **ABANDON** and **CONTINUE** allow instance termination. The difference between the two states is as follows: **ABANDON** stops other lifecycle hooks, but **CONTINUE** allows the completion of other lifecycle hooks. ● The default value of this parameter is **ABANDON**.
default_timeout	No	Integer	Specifies the lifecycle hook timeout duration, which ranges from 60 to 86400 in the unit of second. The default value is 3600. By default, this parameter specifies the instance waiting duration. You can prolong the timeout duration or perform the **CONTINUE** or **ABANDON** operation before the timeout duration expires.

Parameter	Mandatory	Type	Description
notification_topic_urn	No	String	Specifies a unique topic in SMN. This parameter specifies a notification object for a lifecycle hook. When an instance is suspended by the lifecycle hook, the SMN service sends a notification to the object. This notification contains the basic instance information, your customized notification content, and the token for controlling lifecycle operations.
notification_metadata	No	String	Specifies a customized notification, which contains no more than 256 characters in length. The message cannot contain the following characters: <>&'() After a notification object is configured, the SMN service sends your customized notification to the object.

Example Request

This example changes the callback operation of the lifecycle hook named **test-hook1** in the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a** to **CONTINUE**.

```
PUT https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/test-hook1

{
    "default_result": "CONTINUE"
}
```

Response

Table 5-171 Response parameters

Parameter	Type	Description
lifecycle_hook_name	String	Specifies the lifecycle hook name.
lifecycle_hook_type	String	Specifies the lifecycle hook type. ● INSTANCE_TERMINATING ● INSTANCE_LAUNCHING

Parameter	Type	Description
default_result	String	Specifies the default lifecycle hook callback operation. ● ABANDON ● CONTINUE
default_timeout	Integer	Specifies the lifecycle hook timeout duration in the unit of second.
notification_topic_urn	String	Specifies a unique topic in SMN.
notification_topic_name	String	Specifies the topic name in SMN.
notification_metadata	String	Specifies the customized notification.
create_time	String	Specifies the time when the lifecycle hook is created. The time is UTC-compliant.

Example Response

```
{
    "lifecycle_hook_name": "test-hook1",
    "default_result": "CONTINUE",
    "default_timeout": 3600,
    "notification_topic_urn": "urn:smn:regionId:b53e5554fad0494d96206fb84296510b:gsh",
    "notification_topic_name": "gsh",
    "lifecycle_hook_type": "INSTANCE_LAUNCHING",
    "notification_metadata": null,
    "create_time": "2016-11-18T04:01:34Z"
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.

Returned Value	Description
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.9.5 Calling Back a Lifecycle Hook

Function

This interface is used to call back the lifecycle hook specified by a scaling instance based on the lifecycle action key or based on the instance ID and lifecycle hook name.

- If you have completed customized operations before the timeout duration expires, you can terminate or continue the lifecycle operations.

- If you require more time to complete your custom operations, extend the timeout duration to enable the instance to remain in a wait state for an additional hour.

- The callback operation can be performed only when the lifecycle hook of the target instance is in **HANGING** state.

URI

PUT /autoscaling-api/v1/{project_id}/scaling_instance_hook/{scaling_group_id}/
callback

Table 5-172 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.

Request

Table 5-173 Request parameters

Parameter	Mandatory	Type	Description
lifecycle_action_key	No	String	Specifies the lifecycle operation token, which is obtained by calling the API for **querying instance suspension**. When specifying a lifecycle callback object, this field is mandatory if the **instance_id** parameter is not used. If both this parameter and the **instance_id** parameter are used, preferentially use this parameter for callback.
instance_id	No	String	Specifies the instance ID. When a lifecycle callback object is specified, this parameter is mandatory if the **lifecycle_action_key** parameter is not used.
lifecycle_hook_name	No	String	Specifies the lifecycle hook name. When a lifecycle callback object is specified, this parameter is mandatory if the **lifecycle_action_key** parameter is not used.

Parameter	Mandatory	Type	Description
lifecycle_actio n_result	Yes	String	Specifies the lifecycle callback action. • **ABANDON**: terminates the instance. • **CONTINUE**: continues the instance. • **EXTEND**: extends the timeout duration, one hour each time.

Example Request

This example uses the lifecycle token **23880867-6288-4470-98a8-f8bda096b6c4** to perform the **ABANDON** callback operation in the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

```
PUT https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_instance_hook/e5d27f5c-dd76-4a61-b4bc-
a67c5686719a/callback

{
    "lifecycle_action_result": "ABANDON",
    "lifecycle_action_key":"23880867-6288-4470-98a8-f8bda096b6c4"
}
```

Response

None

Example Response

None

Returned Values

- Normal

  204

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.

Returned Value	Description
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.9.6 Querying Instance Suspension

Function

After a lifecycle hook is added, when an AS group performs a scaling action, the lifecycle hook suspends the target instance and sets it to be in waiting state. You can query the instance suspension based on search criteria.

- Search instance suspension by instance ID.

- If no search criteria are specified, the suspension about all instances in the specified AS group is queried by default.

URI

GET /autoscaling-api/v1/{project_id}/scaling_instance_hook/{scaling_group_id}/list

📖 **NOTE**

You can type the question mark (?) and ampersand (&) at the end of the URI to define multiple search criteria. Instance suspension can be searched by all optional parameters in the following table. For details, see the example request.

Table 5-174 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.
instance_id	No	String	Specifies the AS instance ID.

Request

None

Example Request

This example queries the suspension of the instance with ID **b25c1589-c96c-465b-9fef-d06540d1945c** in the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_instance_hook/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/list?instance_id=b25c1589-c96c-465b-9fef-d06540d1945c

Response

Table 5-175 Response parameters

Parameter	Type	Description
instance_hanging_info	Array of **instance_hanging_info** objects	Specifies lifecycle hook information about an AS instance.

Table 5-176 instance_hanging_info field description

Parameter	Type	Description
lifecycle_hook_name	String	Specifies the lifecycle hook name.
lifecycle_action_key	String	Specifies the lifecycle action key, which determines the lifecycle callback object.
instance_id	String	Specifies the AS instance ID.
scaling_group_id	String	Specifies the AS group ID.

Parameter	Type	Description
lifecycle_hook_status	String	Specifies the lifecycle hook status. ● **HANGING**: suspends the instance. ● **CONTINUE**: continues the instance. ● **ABANDON**: terminates the instance.
timeout	String	Specifies the timeout duration in the format of "YYYY-MM-DDThh:mm:ssZ". The time is UTC-compliant.
default_result	String	Specifies the default lifecycle hook callback operation.

Example Response

```
{
    "instance_hanging_info": [
        {
            "instance_id": "b25c1589-c96c-465b-9fef-d06540d1945c",
            "scaling_group_id": "e5d27f5c-dd76-4a61-b4bc-a67c5686719a",
            "lifecycle_hook_name": "hook-test",
            "lifecycle_action_key": "6ebe6e72-4b09-4adb-ae4a-a91dc0560069",
            "default_result": "ABANDON",
            "timeout": "2016-11-15T06:43:41Z",
            "lifecycle_hook_status": "HANGING"
        }
    ]
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.

Returned Value	Description
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.9.7 Deleting a Lifecycle Hook

Function

This interface is used to delete a specified lifecycle hook.

When a scaling action is being performed in an AS group, the lifecycle hooks of the AS group cannot be deleted.

URI

DELETE /autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}/{lifecycle_hook_name}

Table 5-177 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_id	Yes	String	Specifies the AS group ID.
lifecycle_hook_name	Yes	String	Specifies the lifecycle hook name.

Request

None

Example Request

This example deletes the lifecycle hook named **test-hook1** in the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

```
DELETE https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/test-hook1
```

Response

None

Example Response

None

Returned Values

- Normal

204

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.

Returned Value	Description
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.10 Tags

5.10.1 Querying Tags

Function

This API is used to query tags of a specific type of resource in a project.

URI

GET /autoscaling-api/v1/{project_id}/{resource_type}/tags

Table 5-178 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
resource_type	Yes	String	Specifies the resource type. The option is as follows: **scaling_group_tag**: indicates that the resource type is AS groups.

Request

None

Example Request

This example queries tags of AS groups in a project.

```
GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group_tag/tags
```

Response

Table 5-179 Response parameters

Parameter	Type	Description
tags	Array of **tags** objects	Specifies the tags.

Table 5-180 tags field description

Parameter	Type	Description
key	String	Specifies the tag key.
values	Array of strings	Specifies the tag values.

Example Response

```
{
  "tags": [
    {
      "key": "ENV15",
      "values": [
        "ENV15"
      ]
    },
    {
      "key": "111",
      "values": [
        ""
      ]
    },
    {
      "key": "environment",
      "values": [
        "DEV"
      ]
    },
    {
      "key": "ENV151",
      "values": [
        "ENV151"
      ]
    },
    {
      "key": "ENV152",
      "values": [
        "ENV152"
      ]
    }
  ]
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because an internal service error occurred.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the server has received an invalid response.
503 Service Unavailable	Failed to complete the request because the system is currently unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.10.2 Querying Tags of a Resource

Function

This interface is used to query tags of a specified resource in a project.

URI

GET /autoscaling-api/v1/{project_id}/{resource_type}/{resource_id}/tags

Table 5-181 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
resource_typ e	Yes	String	Specifies the resource type. The option is as follows: **scaling_group_tag**: indicates that the resource type is AS groups.
resource_id	Yes	String	Specifies the resource ID.

Request

None

Example Request

This example queries the tags of the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

GET https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group_tag/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/tags

Response

Table 5-182 Response parameters

Parameter	Type	Description
tags	Array of **ResourceTag** objects	Specifies tags. For details, see **Table 5-183**.
sys_tags	Array of **ResourceTag** objects	Specifies system tags. For details, see **Table 5-183**.

Table 5-183 ResourceTag field description

Parameter	Type	Description
key	String	Specifies the tag key.
value	String	Specifies the tag values.

Example Response

```
{
    "tags": [
        {
            "key": "ENV15",
            "value": "ENV15"
        },
        {
            "key": "ENV151",
            "value": "ENV151"
        },
        {
            "key": "ENV152",
            "value": "ENV152"
        }
    ],
    "sys_tags": null
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.

Returned Value	Description
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because an internal service error occurred.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the server has received an invalid response.
503 Service Unavailable	Failed to complete the request because the system is currently unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.10.3 Creating or Deleting a Tag

Function

This API is used to create or delete a tag.

Each AS group can have a maximum of 10 tags added to it.

URI

POST /autoscaling-api/v1/{project_id}/{resource_type}/{resource_id}/tags/action

Table 5-184 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
resource_type	Yes	String	Specifies the resource type. The option is as follows: **scaling_group_tag**: indicates that the resource type is AS groups.
resource_id	Yes	String	Resource ID

Request

Table 5-185 Request parameters

Parameter	Mandatory	Type	Description
tags	Yes	Array of **ResourceTag** objects	Specifies the tag list. For details, see **Table 5-186**. If **action** is set to **delete**, the tag structure cannot be missing, and the key cannot be left blank or an empty string.
action	Yes	String	Specifies the operation ID. The value is case-sensitive and can be any of the following: ● **delete**: indicates deleting a tag. ● **create**: indicates creating a tag. If the same key value already exists, it will be overwritten.

Table 5-186 ResourceTag field description

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. Tag keys of a resource must be unique. A tag key contains a maximum of 36 characters. The character set is as follows: A-Z, a-z, 0-9, hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF).
value	No	String	Specifies the tag value. A tag value contains a maximum of 43 characters and can be left blank. The character set is as follows: A-Z, a-z, 0-9, periods (.), hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF).

Example Request

This example adds two tags (key = **ENV15** and value = **ENV15**) and (key = **ENV151** and value = **ENV151**) to the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

```
POST https://{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group_tag/e5d27f5c-dd76-4a61-b4bc-
a67c5686719a/tags/action

{
  "tags": [
    {
      "key": "ENV15",
      "value": "ENV15"
    },
    {
      "key": "ENV151",
      "value": "ENV151"
    }
  ],
  "action": "create"
}
```

Response

None

Example Response

None

Returned Values

- Normal

  204

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.

Returned Value	Description
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because an internal service error occurred.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the server has received an invalid response.
503 Service Unavailable	Failed to complete the request because the system is currently unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.10.4 Querying Resources by Tag

Function

This API is used to query resources in a project by tag.

By default, resources and resource tags are in descending order of their creation time.

URI

POST /autoscaling-api/v1/{project_id}/{resource_type}/resource_instances/action

Table 5-187 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
resource_type	Yes	String	Specifies the resource type. An example value is **scaling_group_tag**.

Request

Table 5-188 Request parameters

Parameter	Mandatory	Type	Description
tags	No	Array of **Tag** objects	Specifies filter criteria with tags included. A maximum of 10 keys can be contained. The structure body must be complete. For details, see **Table 5-189**.
tags_any	No	Array of **Tag** objects	Specifies filter criteria with any tag included. A maximum of 10 keys can be contained. For details, see **Table 5-189**.
not_tags	No	Array of **Tag** objects	Specifies filter criteria without tags included. A maximum of 10 keys can be contained. For details, see **Table 5-189**.
not_tags_any	No	Array of **Tag** objects	Specifies filter criteria without any tag included. A maximum of 10 keys can be contained. For details, see **Table 5-189**.
limit	No	String	Specifies the maximum number of query records. The maximum value is 1,000, and the minimum value is 1. ● If **action** is set to **count**, this parameter is invalid. ● If **action** is set to **filter**, the default value is **1000**.
marker	No	String	Marks the paging location (index position). You are advised to use the **offset** parameter to set the index position. Marks the paging location (resource ID or index location).
action	Yes	String	Specifies the operation, which can be **filter** or **count**. ● **filter**: indicates that resources are filtered by tag and the resources meeting the search criteria are returned on pages. ● **count**: indicates that resources are searched by tag and the number of resources meeting the search criteria is returned.

Parameter	Mandatory	Type	Description
offset	No	String	Specifies the index position. The query starts from the next image indexed by this parameter. The value must be a non-negative number. You do not need to specify this parameter when querying resources on the first page. When you query resources on subsequent pages, set **offset** to the location returned in the response body for the previous query. ● If the **action** value is **count**, this parameter is invalid. ● If the **action** value is **filter**, the default value is **0**.
matches	No	Array of **match** objects	Specifies fuzzy search. For details, see **Table 5-190**.

Table 5-189 Tag field description

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. It contains a maximum of 36 Unicode characters. It cannot be left blank (This parameter is not verified in the search process.) A maximum of 10 keys are allowed and the key cannot be left blank or an empty string. Each key must be unique.

Parameter	Mandatory	Type	Description
values	Yes	Array of strings	Specifies tag values. A value contains a maximum of 43 Unicode characters. A key contains a maximum of 10 values. Each value of the same key must be unique. • The asterisk (*) is reserved for the system. If the value starts with *, it indicates that fuzzy match is performed for the digits following *. The value cannot contain only asterisks (*). • If the values are null (not default), it indicates **any_value** (querying any value). The resources contain one or multiple values listed in **values** will be found and displayed.

Table 5-190 match field description

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the key based on which to query resources. The parameter value can only be **resource_name**.
value	Yes	String	Specifies the value. The value is a fixed dictionary value. A value contains a maximum of 255 Unicode characters. If the value is an empty string or **resource_id**, exact match is used.

Example Request

- This example queries the details of AS groups of a tenant using the following search criteria: including the tag (key = **key1** and value = **value1**), excluding the tag (key = **key2** and value = **value2**), index position 100, and a maximum number of 100 records.

  POST https: //{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group_tag/resource_instances/action

  {

```
        "offset": "100",
        "limit": "100",
        "action": "filter",
        "matches": [{
            "key": "resource_name",
            "value": "resource1"
        }],
        "not_tags": [{
            "key": "key2",
            "values": ["value2"]
        }],
        "tags": [{
            "key": "key1",
            "values": ["value1"]
        }]
}
```

- This example counts the number of AS groups for a tenant using the
  following search criteria: including the tag (key = **key1** and value = **value1**)
  and excluding the tag (key = **key2** and value = **value2**).
  POST https: //{Endpoint}/autoscaling-api/v1/{project_id}/scaling_group_tag/resource_instances/action

```
{
    "action": "count",
    "not_tags": [{
        "key": "key2",
        "values": ["value2"]
    }],
    "tags": [{
        "key": "key1",
        "values": ["value1"]
    }],
    "matches": [{
        "key": "resource_name",
        "value": "resource1"
    }]
}
```

Response

Table 5-191 Response parameters

Parameter	Type	Description
resources	Array of **Resource** objects	Specifies tag resources. For details, see **Table 5-192**.
total_count	Integer	Specifies the total number of records. When **action** is set to **count**, only this parameter is returned. The values of **resources** and **marker** are not returned.
marker	String	Specifies the paging location identifier.

Table 5-192 Resource field description

Parameter	Type	Description
resource_id	String	Specifies the resource ID.

Parameter	Type	Description
resource_detail	String	Specifies the resource details.
tags	Array of **ResourceTag** objects	Specifies tags. If there is no tag, the field **tags** is taken as an empty array by default. For details, see **Table 5-193**.
resource_name	String	Specifies the resource name. If there is no resource, this parameter is an empty string by default.

Table 5-193 ResourceTag field description

Parameter	Type	Description
key	String	Specifies the tag key. It contains a maximum of 36 Unicode characters.
value	String	Specifies the tag value. It contains a maximum of 43 Unicode characters.

Example Response

- Example response when **action** is set to **filter**

```
{
    "resources": [{
        "resource_id": "64af4b6f-ec51-4436-8004-7a8f30080c87",
        "resource_detail": "SCALING_GROUP_TAG",
        "tags": [{
            "key": "key1","value": "value1"
        }],
        "resource_name": "as_scaling_group_1"
    },
    {
        "resource_id": "7122ef51-604b-40e7-b9b2-1de4cd78dc60",
        "resource_detail": "SCALING_GROUP_TAG",
        "tags": [{
            "key": "key1","value": "value1"
        }],
        "resource_name": "as_scaling_group_2"
    }],
    "marker": "2",
    "total_count": 2
}
```

- Example response when **action** is set to **count**

```
{
    "total_count": 1000
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.11 API Version Query

5.11.1 Querying API Versions

Function

This interface is used to query all API versions of the AS service.

URI

GET /

Request

None

Example Request

This example queries all available API versions.
GET https://{Endpoint}/

Response

Table 5-194 Response parameters

Parameter	Type	Description
versions	Array of **versions** objects	Specifies the API versions.

Table 5-195 versions field description

Parameter	Type	Description
id	String	Specifies the API version ID.
links	Array of **links** objects	Specifies the API URL. For details, see **Table 5-196**.
min_version	String	Specifies the earliest supported API version number.
status	String	Specifies the API version status. ● **CURRENT**: indicates a primary version. ● **SUPPORTED**: indicates an earlier version which is still supported. ● **DEPRECATED**: indicates a deprecated version which may be deleted later.
updated	String	Specifies the release date of an API version.
version	String	Specifies the latest supported API version number.

Table 5-196 links field description

Parameter	Type	Description
href	String	Specifies the API Uniform Resource Locator (URL).
rel	String	Specifies the API URL dependency.

Example Response

```
{
  "versions": [
    {
      "id": "v1",
      "links": [
        {
          "href": "https://as.XXX.mycloud.com/autoscaling-api/v1/",
          "rel": "self"
        }
      ],
      "min_version": "",
      "status": "CURRENT",
      "updated": "2016-06-30T00:00:00Z",
      "version": ""
    },
    {
      "id": "v2",
      "links": [
        {
          "href": "https://as.XXX.mycloud.com/autoscaling-api/v2/",
          "rel": "self"
        }
      ],
      "min_version": "",
      "status": "SUPPORTED",
      "updated": "2018-03-30T00:00:00Z",
      "version": ""
    }
  ]
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.

Returned Value	Description
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.11.2 Querying an API Version

Function

This interface is used to query a specified API version of the AS service.

URI

GET /{api_version}

Table 5-197 Parameter description

Parameter	Mandatory	Type	Description
api_version	Yes	String	Specifies the ID of the AS API version.

Request

None

Example Request

This example queries the API version of V1.

```
GET https://{Endpoint}/v1
```

Response

Table 5-198 Response parameters

Parameter	Type	Description
version	**version** object	Specifies a specified API version.

Table 5-199 version field description

Parameter	Type	Description
id	String	Specifies the API version ID.
links	Array of **links** objects	Specifies the API URL. For details, see **Table 5-200**.
min_version	String	Specifies the earliest supported API version number.
status	String	Specifies the API version status. ● **CURRENT**: indicates a primary version. ● **SUPPORTED**: indicates an earlier version which is still supported. ● **DEPRECATED**: indicates a deprecated version which may be deleted later.
updated	String	Specifies the release date of an API version.
version	String	Specifies the latest supported API version number.

Table 5-200 links field description

Parameter	Type	Description
href	String	Specifies the API Uniform Resource Locator (URL).
rel	String	Specifies the API URL dependency.

Example Response

```
{
  "version": {
    "id": "v1",
    "links": [
      {
        "href": "https://as.XXX.mycloud.com/autoscaling-api/v1/",
        "rel": "self"
      }
    ],
    "min_version": "",
    "status": "CURRENT",
    "updated": "2016-06-30T00:00:00Z",
    "version": ""
  }
}
```

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication to process the request.
408 Request Timeout	The request timed out.

Returned Value	Description
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

6 Application Examples

6.1 Example 1: Creating an AS Configuration

Scenarios

This section describes how to create an AS configuration by calling APIs. For details, see **Calling APIs**.

An AS configuration defines the specifications of the ECSs to be added to an AS group. The specifications include the ECS flavor, image, and disk size. You can use specifications of an existing ECS or create an AS configuration.

Constraints

- The AS configuration is decoupled from the AS group. An AS configuration can be used by multiple AS groups.

- Up to 100 AS configurations per account can be created by default.

Involved APIs

To create an AS configuration, you need to perform several operations, such as querying a user token, ECS flavors, and images. The following APIs are required:

- **Obtaining a User Token**: Determine the user token that can be used to authenticate the calling of other APIs.

- **Querying Details About ECS Flavors**: Determine the ECS flavor to be used to create the AS configuration.

- **Querying Images**: Determine the image for the AS configuration.

- **Querying SSH Key Pairs**: Set the login mode to key pair.

- **Creating an AS Configuration**: Create an AS configuration using the flavor and image you specify.

- **Querying an AS Configuration**: Verify the AS configuration creation.

Procedure

Step 1 Determine the user token that can be used to authenticate the calling of other APIs.

1. View the user token. For details, see **Obtaining a User Token**.

2. Obtain the value of **X-Subject-Token** in the response header.

Step 2 Determine the ECS flavor.

1. View ECS flavors. For details, see **Querying Details About ECS Flavors**.

2. Select a flavor based on site requirements and record the flavor ID.

Step 3 Determine the image.

1. View images. For details, see **Querying Images**.

2. Select an image based on site requirements and record the image ID.

Step 4 Set the login mode to **Key pair**.

1. View SSH key pairs. For details, see **Querying SSH Key Pairs**.

2. Select a key pair as required and record the key pair name.

Step 5 Create an AS configuration using the flavor and image you specify.

- API

  URI format: POST /autoscaling-api/v1/{project_id}/scaling_configuration

  For details about API request parameters, see **Creating an AS Configuration**.

- Example request

  POST: https://{endpoint}/autoscaling-api/v1/0605767c2e80d5762fd0c0146a10aaf2/scaling_configuration

  Obtain *{endpoint}* from "Regions and Endpoints".

  Body:

  ```
  {
      "scaling_configuration_name": "as-config-tlzq",
      "instance_config": {
          "flavorRef": "s3.xlarge.4",
          "imageRef": "627a1223-2ca3-46a7-8d5f-7aef22c74ee6",
          "disk": [
              {
                  "size": 40,
                  "volume_type": "SATA",
                  "disk_type": "SYS"
              }
          ],
          "key_name": "100vm_key",
          "multi_flavor_priority_policy": "PICK_FIRST"
      }
  }
  ```

- Example response

  ```
  {
      "scaling_configuration_id": "f8327883-6a07-4497-9a61-68c03e8e72a2"
  }
  ```

Step 6 Verify the AS configuration creation.

- API

  URI format: GET /autoscaling-api/v1/{project_id}/scaling_configuration/{scaling_configuration_id}

For details, see **Querying an AS Configuration**.

- Example request

  GET: https://{endpoint}/autoscaling-api/v1/0605767c2e80d5762fd0c0146a10aaf2/scaling_configuration/f8327883-6a07-4497-9a61-68c03e8e72a2

  where

  f8327883-6a07-4497-9a61-68c03e8e72a2 is the UUID of the created AS configuration.

  Obtain *{endpoint}* from "Regions and Endpoints".

- Example response

```
{
    "scaling_configuration": {
        "tenant": "0605767c2e80d5762fd0c0146a10aaf2",
        "scaling_configuration_id": "f8327883-6a07-4497-9a61-68c03e8e72a2",
        "scaling_configuration_name": " config_name_1",
        "instance_config": {
            "disk": [
                {
                    "size": 40,
                    "volume_type": "SATA",
                    "disk_type": "SYS"
                },
                {
                    "size": 100,
                    "volume_type": "SATA",
                    "disk_type": "DATA"
                }
            ],
            "adminPass": "***",
            "personality": null,
            "instance_name": null,
            "instance_id": null,
            "flavorRef": "103",
            "imageRef": "627a1223-2ca3-46a7-8d5f-7aef22c74ee6",
            "key_name": "keypair01",
            "public_ip": null,
            "user_data": null,
            "metadata": {},
            "security_groups": null,
            "multi_flavor_priority_policy": "PICK_FIRST"
        },
        "create_time": "2015-07-23T01:04:07Z"
    }
}
```

----End

6.2 Example 2: Creating an AS Group

Scenarios

This section describes how to create an AS group by calling APIs. For details, see **Calling APIs**.

An AS group consists of a collection of instances that apply to the same scenario. It is the basis for enabling or disabling AS policies and performing scaling actions. An AS group specifies parameters, such as the maximum number of instances, expected number of instances, minimum number of instances, VPC, subnet, and load balance settings.

Constraints

- Up to 10 AS groups per account can be created by default.
- If ELB is configured, AS automatically binds or unbinds a load balancer to or from an instance when the instance is added or removed from the AS group.
- If an AS group uses ELB health check, the listening ports on the load balancers must be enabled for the instances in the AS group. Enable the listening ports in security groups. For details, see **Adding a Security Group Rule**.

Involved APIs

To create an AS group, you need to perform several operations, such as querying a user token, security groups, and AS configurations. The following APIs are required:

- **Obtaining a User Token**: Determine the user token that can be used to authenticate the calling of other APIs.
- **Querying VPCs**: Determine the VPC for the ECSs in the AS group to be created.
- **Querying Security Groups**: Determine the security group to which the ECSs in the AS group will be added.
- **Querying Subnets**: Determine the subnet for the ECSs in the AS group.
- **Querying AS Configurations**: Determine the AS configuration of the AS group.
- **Querying AZs**: Determine the AZ where the AS group to be created is located.
- **Creating an AS Group**: Create an AS group using the VPC and AS configuration you specify.
- **Querying an AS Group**: Verify the AS group creation.

Procedure

Step 1 Determine the user token that can be used to authenticate the calling of other APIs.

1. View the user token. For details, see **Obtaining a User Token**.
2. Obtain the value of **X-Subject-Token** in the response header.

Step 2 Determine the VPC.

1. View VPCs. For details, see **Querying VPCs**.
2. Select a VPC based on site requirements and record the VPC ID.

Step 3 Determine the security group.

1. View security groups. For details, see **Querying Security Groups**.
2. Select a security group based on site requirements and record the security group ID.

Step 4 Determine the subnet.

1. View subnets in the specified VPC based on VPC ID. For details, see **Querying Subnets**.

2. Select a subnet based on site requirements and record the subnet ID.

Step 5 Determine the AS configuration.

1. View AS configurations.

– API

URI format: GET /autoscaling-api/v1/{project_id}/scaling_configuration

For details about the API request parameters, see **Querying AS Configurations**.

– Example request

GET: https://{endpoint}/autoscaling-api/v1/0605767c2e80d5762fd0c0146a10aaf2/scaling_configuration?start_number=0&limit=10

Obtain *{endpoint}* from "Regions and Endpoints".

– Example response

```
{
    "limit": 20,
    "total_number": 2,
    "start_number": 0,
    "scaling_configurations": [
        {
            "tenant": "ce061903a53545dcaddb300093b477d2",
            "scaling_configuration_id": "6afe46f9-7d3d-4046-8748-3b2a1085ad86",
            "scaling_configuration_name": " config_name_1",
            "instance_config": {
                "disk": [
                    {
                        "size": 40,
                        "volume_type": "SATA",
                        "disk_type": "SYS"
                    },
                    {
                        "size": 100,
                        "volume_type": "SATA",
                        "disk_type": "DATA"
                    }
                ],
                "personality": null,
                "instance_name": null,
                "instance_id": null,
                "flavorRef": "103",
                "imageRef": "37ca2b35-6fc7-47ab-93c7-900324809c5c",
                "key_name": "keypair01",
                "public_ip": null,
                "user_data": null,
                "metadata": {},
                "security_groups": [{
                    "id": "6c22a6c0-b5d2-4a84-ac56-51090dcc33be"
                }],
            },
            "create_time": "2015-07-23T01:04:07Z"
        }
    ]
}
```

2. Select an AS configuration based on site requirements and record the AS configuration ID.

Step 6 Determine the AZ.

1. View AZs. For details, see **Querying AZs**.

2. Select an AZ as required and record the AZ name.

Step 7 Create an AS group using the VPC and AS configuration you specify.

- API

  URL format: POST /autoscaling-api/v1/{project_id}/scaling_group

  For details about the API request parameters, see **Creating an AS Group**.

- Example request

  POST: https://{endpoint}/autoscaling-api/v1/0605767c2e80d5762fd0c0146a10aaf2/scaling_group

  Obtain *{endpoint}* from "Regions and Endpoints".

  Body:

```
{
"scaling_group_name": "GroupNameTest",
"scaling_configuration_id": "47683a91-93ee-462a-a7d7-484c006f4440",
"desire_instance_number": 0,
"min_instance_number": 0,
"max_instance_number": 10,
"health_periodic_audit_method": "NOVA_AUDIT",
"vpc_id": "a8327883-6b07-4497-9c61-68d03ee193a",
"available_zones": ["XXXa","XXXb"],
"networks": [
        {
            "id": "3cd35bca-5a10-416f-8994-f79169559870"
        }
],
"enterprise_project_id": "c92b1a5d-6f20-43f2-b1b7-7ce35e58e413",
"multi_az_priority_policy": "PICK_FIRST"
}
```

- Example response

```
{
    "scaling_group_id": "a8327883-6b07-4497-9c61-68d03ee193a1"
}
```

Step 8 Verify the AS group creation.

- API

  URI format: GET /autoscaling-api/v1/{project_id}/scaling_group/{scaling_group_id}

  For details about the API request parameters, see **Querying an AS Group**.

- Example request

  GET: https://{endpoint}/autoscaling-api/v1/0605767c2e80d5762fd0c0146a10aaf2/scaling_group/a8327883-6b07-4497-9c61-68d03ee193a1

  where

  a8327883-6b07-4497-9c61-68d03ee193a1 is the UUID of the created AS configuration.

  Obtain *{endpoint}* from "Regions and Endpoints".

- Example response

```
{
    "scaling_group": {
     "networks": [
            {
                "id": "a8327883-6b07-4497-9c61-68d03ee193a ",
                "ipv6_enable": true,
                "ipv6_bandwidth":
```

```
                        {
                            "id": "076ee2ff-f23e-4338-b8ac-1bc7278532d5"
                        }
                    }
                ],
                "available_zones": [
                    "XXXa",
                    "XXXb"
                ],
                "detail": null,
                "scaling_group_name": "api_gateway_modify",
                "scaling_group_id": "d4e50321-3777-4135-97f8-9f5e9714a4b0",
                "scaling_group_status": "INSERVICE",
                "scaling_configuration_id": "53579851-3841-418d-a97b-9cecdb663a90",
                "scaling_configuration_name": "press",
                "current_instance_number": 7,
                "desire_instance_number": 8,
                "min_instance_number": 0,
                "max_instance_number": 100,
                "cool_down_time": 900,
                "lb_listener_id": null,
                "security_groups": [
                    {
                        "id": "23b7b999-0a30-4b48-ae8f-ee201a88a6ab"
                    }
                ],
                "create_time": "2015-09-01T08:36:10Z",
                "vpc_id": "3e22f934-800d-4bb4-a588-0b9a76108190",
                "health_periodic_audit_method": "NOVA_AUDIT",
                "health_periodic_audit_time": 5,
                "health_periodic_audit_grace_period": 600,
                "instance_terminate_policy": "OLD_CONFIG_OLD_INSTANCE",
                "is_scaling": true,
                "delete_publicip": false,
',
                "enterprise_project_id": "c92b1a5d-6f20-43f2-b1b7-7ce35e58e413",
                "activity_type": "MODIFY_ELB",
                "multi_az_priority_policy": "PICK_FIRST"
        }
    }
```

----End

6.3 Example 3: Enabling an AS Group

Scenarios

This section describes how to enable an AS group by calling APIs. For details, see **Calling APIs**.

An AS group consists of a collection of instances that apply to the same scenario. It is the basis for enabling or disabling AS policies and performing scaling actions.

Only enabled AS groups support scaling actions.

Involved APIs

- **Obtaining a User Token**: Determine the user token that can be used to authenticate the calling of other APIs.

- **Querying AS Groups**: Determine the AS group to be enabled.

- **Enabling or Disabling an AS Group**: Enable the AS group you specify.

Procedure

Step 1 Determine the user token that can be used to authenticate the calling of other APIs.

1. View the user token. For details, see **Obtaining a User Token**.

2. Obtain the value of **X-Subject-Token** in the response header.

Step 2 Determine the AS group.

1. View AS groups.
   - API

     URI format: GET /autoscaling-api/v1/{project_id}/scaling_group

     For details, see **Querying AS Groups**.
   - Example request

     This example shows how to query AS groups with AS configuration ID **1d281494-6085-4579-b817-c1f813be835f**.

     GET https://{endpoint}/autoscaling-api/v1/0605767c2e80d5762fd0c0146a10aaf2/scaling_group?scaling_configuration_id=1d281494-6085-4579-b817-c1f813be835f

     Obtain *{endpoint}* from "Regions and Endpoints".
   - Example response

```
{
  "limit": 20,
  "scaling_groups": [
    {
      "networks": [
        {
          "id": "a8327883-6b07-4497-9c61-68d03ee193a",
          "ipv6_enable": true,
          "ipv6_bandwidth":
          {
            "id": "076ee2ff-f23e-4338-b8ac-1bc7278532d5"
          }
        }
      ],
      "available_zones": [
        "XXXa",
        "XXXb"
      ],
      "detail": null,
      "scaling_group_name": "as-group-test",
      "scaling_group_id": "77a7a397-7d2f-4e79-9da9-6a35e2709150",
      "scaling_group_status": "INSERVICE",
      "scaling_configuration_id": "1d281494-6085-4579-b817-c1f813be835f",
      "scaling_configuration_name": "healthCheck",
      "current_instance_number": 0,
      "desire_instance_number": 1,
      "min_instance_number": 0,
      "max_instance_number": 500,
      "cool_down_time": 300,
      "lb_listener_id": "f06c0112570743b51c0e8fbe1f235bab",
      "security_groups": [
        {
          "id": "8a4b1d5b-0054-419f-84b1-5c8a59ebc829"
        }
      ],
      "create_time": "2015-07-23T02:46:29Z",
      "vpc_id": "863ccae2-ee85-4d27-bc5b-3ba2a198a9e2",
      "health_periodic_audit_method": "ELB_AUDIT",
      "health_periodic_audit_time": 5,
```

```
            "health_periodic_audit_grace_period": 600,
            "instance_terminate_policy": "OLD_CONFIG_OLD_INSTANCE",
            "is_scaling": false,
            "delete_publicip": false,
            "enterprise_project_id": "c92b1a5d-6f20-43f2-b1b7-7ce35e58e413",
            "multi_az_priority_policy": "PICK_FIRST"
        }
    ],
    "total_number": 1,
    "start_number": 0
}
```

2. Select an AS group and record the AS group ID.

Step 3 Enable the specified AS group.

- API

  URI format: POST /autoscaling-api/v1/{project_id}/scaling_group/{scaling_group_id}/action

  For details, see **Enabling or Disabling an AS Group**.

- Example request

  POST: https://{endpoint}/autoscaling-api/v1/0605767c2e80d5762fd0c0146a10aaf2/scaling_group/77a7a397-7d2f-4e79-9da9-6a35e2709150/action

  Obtain *{endpoint}* from "Regions and Endpoints".

  Body:

  ```
  {
      "action": "resume"
  }
  ```

- Example response

  The HTTP status code **204** is returned.

  ----End

6.4 Example 4: Creating an AS Policy

Scenarios

This section describes how to create an AS policy by calling APIs. For details, see **Calling APIs**.

An AS policy specifies a condition for triggering a scaling action. When the trigger condition is met, a scaling action occurs.

Involved APIs

Creating an AS policy involves the following APIs:

- **Obtaining a User Token**: Determine the user token that can be used to authenticate the calling of other APIs.

- **Querying AS Groups**: Determine the AS group for which the AS policy is created.

- **Creating an AS Policy**: Create a policy for the specified AS group.

● **Querying AS Policy Details**: Verify the AS policy creation.

Procedure

Step 1 Determine the user token that can be used to authenticate the calling of other APIs.

1. View the user token. For details, see **Obtaining a User Token**.
2. Obtain the value of **X-Subject-Token** in the response header.

Step 2 Determine the AS group.

1. View AS groups.
   – API

   URI format: GET /autoscaling-api/v1/{project_id}/scaling_group

   For details, see **Querying AS Groups**.

   – Example request

   GET: https://{endpoint}/autoscaling-api/v1/0605767c2e80d5762fd0c0146a10aaf2/scaling_group

   Obtain *{endpoint}* from "Regions and Endpoints".

   – Example response

```
{
  "limit": 20,
  "scaling_groups": [
    {
      "networks": [
        {
          "id": "a8327883-6b07-4497-9c61-68d03ee193a",
          "ipv6_enable": true,
          "ipv6_bandwidth":
          {
            "id": "076ee2ff-f23e-4338-b8ac-1bc7278532d5"
          }
        }
      ],
      "available_zones": [
        "XXXa",
        "XXXb"
      ],
      "detail": null,
      "scaling_group_name": "as-group-test",
      "scaling_group_id": "77a7a397-7d2f-4e79-9da9-6a35e2709150",
      "scaling_group_status": "INSERVICE",
      "scaling_configuration_id": "1d281494-6085-4579-b817-c1f813be835f",
      "scaling_configuration_name": "healthCheck",
      "current_instance_number": 0,
      "desire_instance_number": 1,
      "min_instance_number": 0,
      "max_instance_number": 500,
      "cool_down_time": 300,
      "lb_listener_id": "f06c0112570743b51c0e8fbe1f235bab",
      "security_groups": [
        {
          "id": "8a4b1d5b-0054-419f-84b1-5c8a59ebc829"
        }
      ],
      "create_time": "2015-07-23T02:46:29Z",
      "vpc_id": "863ccae2-ee85-4d27-bc5b-3ba2a198a9e2",
      "health_periodic_audit_method": "ELB_AUDIT",
      "health_periodic_audit_time": 5,
      "health_periodic_audit_grace_period": 600,
      "instance_terminate_policy": "OLD_CONFIG_OLD_INSTANCE",
```

```
            "is_scaling": false,
            "delete_publicip": false,
            "enterprise_project_id": "c92b1a5d-6f20-43f2-b1b7-7ce35e58e413",
            "multi_az_priority_policy": "PICK_FIRST"
        }
    ],
    "total_number": 1,
    "start_number": 0
    }
```

2. Select an AS group and record the AS group ID.

Step 3 Create an AS policy for the selected AS group.

- API

  URI format: POST /autoscaling-api/v1/{project_id}/scaling_policy

  For details, see **Creating an AS Policy**.

- Example request

  This example shows how to create a periodic AS policy named **as-policy-7a75**. The policy takes effect from 2015-12-14T03:34Z through 2015-12-27T03:34Z. During this period, one instance will be added to AS group with ID **5bc3aa02-b83e-454c-aba1-4d2095c68f8b** at 16:00 every day.

  POST: https://{endpoint}/autoscaling-api/v1/0605767c2e80d5762fd0c0146a10aaf2/scaling_policy

  Obtain *{endpoint}* from "Regions and Endpoints".

  Body:

```
{
    "scaling_policy_name": "as-policy-7a75",
    "scaling_policy_action": {
        "operation": "ADD",
        "instance_number": 1
    },
    "cool_down_time": 900,
    "scheduled_policy": {
        "launch_time": "16:00",
        "recurrence_type": "Daily",
        "start_time": "2015-12-14T03:34Z",
        "end_time": "2015-12-27T03:34Z"
    },
    "scaling_policy_type": "RECURRENCE",
    "scaling_group_id": "5bc3aa02-b83e-454c-aba1-4d2095c68f8b"
}
```

- Example response

```
{
    "scaling_policy_id": "0h327883-324n-4dzd-9c61-68d03ee191dd"
}
```

Step 4 Verify the AS policy creation.

- API

  URI format: GET /autoscaling-api/v1/{project_id}/scaling_policy/{scaling_policy_id}

  For details, see **Querying an AS Policy**.

- Example request

  This example shows how to query details about the AS policy with ID **0h327883-324n-4dzd-9c61-68d03ee191dd**.

GET: https://{endpoint}/autoscaling-
api/v1/0605767c2e80d5762fd0c0146a10aaf2/scaling_policy/
fd7d63ce-8f5c-443e-b9a0-bef9386b23b3

Obtain *{endpoint}* from "Regions and Endpoints".

- Example response

```
{
    "scaling_policy": {
        "scaling_policy_id": "fd7d63ce-8f5c-443e-b9a0-bef9386b23b3",
        "scaling_group_id": "e5d27f5c-dd76-4a61-b4bc-a67c5686719a",
"scaling_policy_name": "Scheduled 1",
        "scaling_policy_type": "SCHEDULED",
        "scheduled_policy": {
            "launch_time": "2015-07-24T01:21Z"
        },
        "cool_down_time": 300,
        "scaling_policy_action": {
            "operation": "REMOVE",
            "instance_number": 1
        },
        "policy_status": "INSERVICE",
        "create_time": "2015-07-24T01:09:30Z"
    }
}
```

----End

6.5 Example 5: Performing Operations on Instances in Batches

Scenarios

This section describes how to perform operations on instances in batches by calling APIs. For details, see **Calling APIs**.

An instance is an ECS in an AS group. AS allows you to add or remove instances to or from an AS group in batches, configure instance protection or cancel the configuration for the instances in an AS group in batches, and set the standby mode or cancel the setting for the instances in an AS group in batches.

Constraints

- After instances are removed from an AS group, the number of instances in the AS group cannot be less than the minimum number of instances.

- After instances are added to an AS group, the number of instances in the AS group cannot be greater than the maximum number of instances.

- Instances can be added to an AS group only when the AS group is in the **INSERVICE** state and has no scaling action in progress.

- Instances can be removed from an AS group only when no scaling action is in progress. Only instances in **INSERVICE** state can be removed from an AS group.

- To add instances to an AS group, ensure that the AZ of the instances must be within that of the AS group and that the instances are in the same VPC as the AS group.

Involved APIs

- **Obtaining a User Token**: Determine the user token that can be used to authenticate the calling of other APIs.

- **Querying AS Groups**: Determine the AS group in which the instances will be operated in batches.

- **Querying Instances in an AS Group**: Determine the instances to be operated in batches in the specified AS group.

- **Performing Operations on Instances in Batches**: Remove the instances from the AS group in a batch.

Procedure

Step 1 Determine the user token that can be used to authenticate the calling of other APIs.

1. View the user token. For details, see **Obtaining a User Token**.

2. Obtain the value of **X-Subject-Token** in the response header.

Step 2 Determine the AS group.

1. View AS groups.

   - API

     URI format: GET /autoscaling-api/v1/{project_id}/scaling_group

     For details, see **Querying AS Groups**.

   - Example request

     GET: https://{endpoint}/autoscaling-api/v1/0605767c2e80d5762fd0c0146a10aaf2/scaling_group

     Obtain *{endpoint}* from "Regions and Endpoints".

   - Example response

```
{
  "limit": 20,
  "scaling_groups": [
    {
      "networks": [
        {
          "id": "a8327883-6b07-4497-9c61-68d03ee193a",
          "ipv6_enable": true,
          "ipv6_bandwidth":
          {
            "id": "076ee2ff-f23e-4338-b8ac-1bc7278532d5"
          }
        }
      ],
      "available_zones": [
        "XXXa",
        "XXXb"
      ],
      "detail": null,
      "scaling_group_name": "as-group-test",
      "scaling_group_id": "77a7a397-7d2f-4e79-9da9-6a35e2709150",
      "scaling_group_status": "INSERVICE",
      "scaling_configuration_id": "1d281494-6085-4579-b817-c1f813be835f",
      "scaling_configuration_name": "healthCheck",
      "current_instance_number": 0,
      "desire_instance_number": 1,
      "min_instance_number": 0,
      "max_instance_number": 500,
```

```
            "cool_down_time": 300,
            "lb_listener_id": "f06c0112570743b51c0e8fbe1f235bab",
            "security_groups": [
                {
                    "id": "8a4b1d5b-0054-419f-84b1-5c8a59ebc829"
                }
            ],
            "create_time": "2015-07-23T02:46:29Z",
            "vpc_id": "863ccae2-ee85-4d27-bc5b-3ba2a198a9e2",
            "health_periodic_audit_method": "ELB_AUDIT",
            "health_periodic_audit_time": 5,
            "health_periodic_audit_grace_period": 600,
            "instance_terminate_policy": "OLD_CONFIG_OLD_INSTANCE",
            "is_scaling": false,
            "delete_publicip": false,
            "enterprise_project_id": "c92b1a5d-6f20-43f2-b1b7-7ce35e58e413",
            "multi_az_priority_policy": "PICK_FIRST"
        }
    ],
    "total_number": 1,
    "start_number": 0
}
```

2. Select an AS group and record the AS group ID.

Step 3 Determine the instances.

1. View the instances in the specified AS group.

   – API

     URI format: GET /autoscaling-api/v1/{project_id}/scaling_group_instance/{scaling_group_id}/list

     For details, see **Querying Instances in an AS Group**.

   – Example request

     This example shows how to query enabled, healthy instances in the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a**.

     GET: https://{endpoint}/autoscaling-api/v1/0605767c2e80d5762fd0c0146a10aaf2/scaling_group_instance/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/list?life_cycle_state=INSERVICE&health_status=NORMAL

     Obtain {endpoint} from "Regions and Endpoints".

   – Example response

```
{
    "limit": 10,
    "total_number": 1,
    "start_number": 0,
    "scaling_group_instances": [
        {
            "instance_id": "b25c1589-c96c-465b-9fef-d06540d1945c",
            "scaling_group_id": "e5d27f5c-dd76-4a61-b4bc-a67c5686719a",
            "scaling_group_name": "discuz",
            "life_cycle_state": "INSERVICE",
            "health_status": "NORMAL",
            "scaling_configuration_name": "discuz",
            "scaling_configuration_id": "ca3dcd84-d197-4c4f-af2a-cf8ba39696ac",
            "create_time": "2015-07-23T06:47:33Z",
            "instance_name": "discuz_3D210808",
            "protect_from_scaling_down": false
        }
    ]
}
```

2. Select instances and record their IDs.

Step 4 Remove the instances from the AS group in a batch.

- API

  URI format: POST /autoscaling-api/v1/{project_id}/scaling_group_instance/{scaling_group_id}/action

  For details, see **Batch Managing Instances**.

- Example request

  This example shows how to remove and delete instances with IDs **instance_id_1** and **instance_id_2** from the AS group with ID **e5d27f5c-dd76-4a61-b4bc-a67c5686719a** in a batch.

  POST: https://{endpoint}/autoscaling-api/v1/0605767c2e80d5762fd0c0146a10aaf2/scaling_group_instance/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/action

  Obtain *{endpoint}* from "Regions and Endpoints".

  Body:

  ```
  {
  "action": "REMOVE",
  "instances_id": [
  "instance_id_1",
  "instance_id_2"
  ],
  "instance_delete": "yes"
  }
  ```

- Example response

  The HTTP status code **204** is returned.

----End

7 Permissions and Supported Actions

7.1 Introduction

You can use Identity and Access Management (IAM) for fine-grained permissions management of your AS resources. If your Huawei Cloud account does not need individual IAM users, you can skip this section.

By default, new IAM users do not have any permissions assigned. You need to add a user to one or more groups, and assign policies or roles to these groups. The users then inherit permissions from the groups and can perform specified operations on cloud services based on the permissions.

You can grant users permissions by using **roles** and **policies**. Roles: A type of coarse-grained authorization mechanism that defines permissions related to user responsibilities. Policies define API-based permissions for operations on specific resources under certain conditions, allowing for more fine-grained, secure access control of cloud resources.

> 📖 **NOTE**
>
> Policy-based authorization is useful if you want to allow or deny access to an API.

An account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. The required permissions are determined by the actions supported by the API. Only users with the policies allowing for those actions can call the API successfully. For example, if an IAM user wants to query AS groups using an API, the user must have been granted permissions that allow the **as:groups:list** action.

Supported Actions

Operations supported by a fine-grained policy are specific to APIs. The following describes the headers of the action tables provided in this chapter:

- Permissions: defined by actions in a custom policy.
- APIs: REST APIs that can be called by a user who has been granted specific permissions

- Actions: specific operations that are allowed or denied

- Dependencies: actions which a specific action depends on. When allowing an action for a user, you also need to allow any existing action dependencies for that user.

- IAM projects/Enterprise projects: the authorization scope of a custom policy. A custom policy can be applied to IAM projects or enterprise projects or both. Policies that contain actions for both IAM and enterprise projects can be used and take effect for both IAM and Enterprise Management. Policies that contain actions only for IAM projects can be used and applied to IAM only. Administrators can check whether an action supports IAM projects or enterprise projects in the action list. "√" indicates that the action supports the project and "×" indicates that the action does not support the project. For details about the differences between IAM and enterprise management, see **What Are the Differences Between IAM and Enterprise Management?**

AS supports the following actions in custom policies:

- **AS group** actions, including actions supported by all AS group APIs, such as the APIs for creating, modifying, and querying an AS group.

- **AS configuration** actions, including actions supported by all AS configuration APIs, such as the APIs for creating, deleting, and querying AS configurations.

- **Instance** actions, including actions supported by all instance APIs, such as the APIs for querying the instances in an AS group and removing instances from an AS group.

- **AS policy** actions, including actions supported by all AS policy APIs, such as the APIs for creating and modifying an AS policy.

- **AS policy execution log** actions, including the action supported by the API for querying AS policy execution logs.

- **Scaling action log** actions, including actions supported by the APIs for querying scaling action logs.

- **Quota** actions, including actions supported by all AS quota APIs, such as the API for querying AS quotas.

- **Notification** actions, including actions supported by all AS notification APIs, such as the API for querying notifications of an AS group.

- **Lifecycle hook** actions, including actions supported by all lifecycle hook APIs, such as the API for creating a lifecycle hook.

- **Tag management** actions, including actions supported by all AS tag APIs, such as the API for querying tags.

7.2 AS Groups

Permission	API	Action	IAM Project	Enterprise Project
Creating an AS group	POST / autoscaling-api/v1/{project_id}/scaling_group	as:groups:create	√	√
Querying AS groups	GET / autoscaling-api/v1/{project_id}/scaling_group	as:groups:list	√	√
Querying AS group details	GET / autoscaling-api/v1/{project_id}/scaling_group/{scaling_group_id}	as:groups:get	√	√
Modifying an AS group	PUT / autoscaling-api/v1/{project_id}/scaling_group/{scaling_group_id}	as:groups:update	√	√
Deleting an AS group	DELETE / autoscaling-api/v1/{project_id}/scaling_group/{scaling_group_id}	as:groups:delete	√	√

Permission	API	Action	IAM Project	Enterprise Project
Enabling or disabling an AS group	POST / autoscaling-api/v1/ {project_id}/ scaling_grou p/ {scaling_grou p_id}/action	as:groups:a ction	√	√

7.3 AS Configurations

Permission	API	Action	IAM Project	Enterprise Project
Creating an AS configuration	POST / autoscaling-api/v1/ {project_id}/ scaling_confi guration	as:configs:c reate	√	√
Querying AS configurations	GET / autoscaling-api/v1/ {project_id}/ scaling_confi guration	as:configs:li st	√	√
Querying AS configuration details	GET / autoscaling-api/v1/ {project_id}/ scaling_confi guration/ {scaling_conf iguration_id}	as:configs:g et	√	√
Deleting an AS configuration	DELETE / autoscaling-api/v1/ {project_id}/ scaling_confi guration/ {scaling_conf iguration_id}	as:configs:d elete	√	√

Permission	API	Action	IAM Project	Enterprise Project
Batch deleting AS configurations	POST / autoscaling-api/v1/ {project_id}/ scaling_confi gurations	as:configs:b atchDelete	√	√

7.4 Instances

Permission	API	Action	IAM Project	Enterprise Project
Querying instances in an AS group	GET / autoscaling-api/v1/ {project_id}/ scaling_grou p_instance/ {scaling_grou p_id}/list	as:instances :list	√	√
Removing instances from an AS group	DELETE / autoscaling-api/v1/ {project_id}/ scaling_grou p_instance/ {instance_id}	as:instances :delete	√	√
Performing operations on instances in batches	POST / autoscaling-api/v1/ {project_id}/ scaling_grou p_instance/ {scaling_grou p_id}/action	as:instances :batchActio n	√	√

7.5 AS Policies

Permission	API	Action	IAM Project	Enterprise Project
Creating an AS policy	POST / autoscaling-api/v1/ {project_id}/ scaling_policy	as:policies:create	√	√
Modifying an AS policy	PUT / autoscaling-api/v1/ {project_id}/ scaling_policy / {scaling_policy_id}	as:policies:update	√	√
Querying AS policies	GET / autoscaling-api/v1/ {project_id}/ scaling_policy / {scaling_group_id}/list	as:policies:list	√	√
Querying AS policy details	GET / autoscaling-api/v1/ {project_id}/ scaling_policy / {scaling_policy_id}	as:policies:get	√	√
Executing, enabling, or disabling an AS policy	POST / autoscaling-api/v1/ {project_id}/ scaling_policy / {scaling_policy_id}/action	as:policies:action	√	√

Permission	API	Action	IAM Project	Enterprise Project
Deleting an AS policy	DELETE / autoscaling-api/v1/ {project_id}/ scaling_policy / {scaling_polic y_id}	as:policies:d elete	√	√
Creating an AS policy	POST / autoscaling-api/v2/ {project_id}/ scaling_policy	as:policies:c reate	√	√
Modifying an AS policy	PUT / autoscaling-api/v2/ {project_id}/ scaling_policy / {scaling_polic y_id}	as:policies:u pdate	√	√
Querying AS policies	GET / autoscaling-api/v2/ {project_id}/ scaling_policy / {scaling_reso urce_id}/list	as:policies:li st	√	√

Permission	API	Action	IAM Project	Enterprise Project
Querying AS policies	GET / autoscaling-api/v2/ {project_id}/ scaling_polic y{? scaling_resou rce_id, scaling_resou rce_type,scali ng_policy_na me, scaling_policy _id,scaling_p olicy_type,sta rt_number,li mit,sort_by,or der}	as:groups:g et as:policies:li st	√	√
Querying AS policy details	GET / autoscaling-api/v2/ {project_id}/ scaling_policy / {scaling_polic y_id}	as:policies:g et	√	√
Performing operations on AS policies in batches	POST / autoscaling-api/v1/ {project_id}/ scaling_polici es/action	as:policies:b atchAction	√	√

7.6 AS Policy Execution Logs

Permission	API	Action	IAM Project	Enterprise Project
Querying AS policy execution logs	GET / autoscaling-api/v1/{project_id}/scaling_policy_execute_log/{scaling_policy_id}	as:policyExecuteLogs:list	√	√

7.7 Scaling Action Logs

Permission	API	Action	IAM Project	Enterprise Project
Querying scaling action logs	GET / autoscaling-api/v1/{project_id}/scaling_activity_log/{scaling_group_id}	as:acivityLogs:list	√	√
Querying scaling action logs (V2)	GET / autoscaling-api/v2/{project_id}/scaling_activity_log/{scaling_group_id}	as:acivityLogs:list	√	√

7.8 Quotas

Permission	API	Action	IAM Project	Enterprise Project
Querying AS quotas	GET / autoscaling-api/v1/ {project_id}/ quotas	as:quotas:g et	√	√
Querying AS policy and instance quotas	GET / autoscaling-api/v1/ {project_id}/ quotas/ {scaling_grou p_id}	as:quotas:g et	√	√

7.9 Notifications

Permission	API	Action	IAM Project	Enterprise Project
Configuring notifications for an AS group	PUT / autoscaling-api/v1/ {project_id}/ scaling_notific ation/ {scaling_grou p_id}	as:notificati ons:set	√	√
Querying notifications of an AS group	GET / autoscaling-api/v1/ {project_id}/ scaling_notific ation/ {scaling_grou p_id}	as:notificati ons:list	√	√

Permission	API	Action	IAM Project	Enterprise Project
Deleting a notification of an AS group	DELETE / autoscaling-api/v1/ {project_id}/ scaling_notific ation/ {scaling_grou p_id}/ {topic_urn}	as:notificati ons:delete	√	√

7.10 Lifecycle Hooks

Permission	API	Action	IAM Project	Enterprise Project
Creating a lifecycle hook	POST / autoscaling-api/v1/ {project_id}/ scaling_lifecyc le_hook/ {scaling_grou p_id}	as:lifecycle Hooks:crea te	√	√
Querying lifecycle hooks	GET / autoscaling-api/v1/ {project_id}/ scaling_lifecyc le_hook/ {scaling_grou p_id}/list	as:lifecycle Hooks:list	√	√
Querying lifecycle hook details	GET / autoscaling-api/v1/ {project_id}/ scaling_lifecyc le_hook/ {scaling_grou p_id}/ {lifecycle_hoo k_name}	as:lifecycle Hooks:get	√	√

Permission	API	Action	IAM Project	Enterprise Project
Modifying a lifecycle hook	PUT / autoscaling-api/v1/ {project_id}/ scaling_lifecycle_hook/ {scaling_group_id}/ {lifecycle_hook_name}	as:lifecycleHooks:update	√	√
Calling back an instance lifecycle hook	PUT / autoscaling-api/v1/ {project_id}/ scaling_instance_hook/ {scaling_group_id}/callback	as:instanceHooks:action	√	√
Querying instance suspension	GET / autoscaling-api/v1/ {project_id}/ scaling_instance_hook/ {scaling_group_id}/list	as:instanceHooks:list	√	√
Deleting a lifecycle hook	DELETE / autoscaling-api/v1/ {project_id}/ scaling_lifecycle_hook/ {scaling_group_id}/ {lifecycle_hook_name}	as:lifecycleHooks:delete	√	√

7.11 Tags

Permission	API	Action	IAM Project	Enterprise Project
Querying tags	GET / autoscaling-api/v1/{project_id}/{resource_type}/tags	as:tags:list	√	×
Querying tags of a resource	GET / autoscaling-api/v1/{project_id}/{resource_type}/{resource_id}/tags	as:tags:get	√	×
Updating or deleting a tag	POST / autoscaling-api/v1/{project_id}/{resource_type}/{resource_id}/tags/action	as:tags:set	√	×
Querying resources	POST / autoscaling-api/v1/{project_id}/{resource_type}/resource_instances/action	as:tagResources:list	√	×

A Appendix

A.1 AS Metrics

Function

This section describes metrics reported by AS to Cloud Eye as well as their namespaces and dimensions. You can use APIs provided by Cloud Eye to view the AS metrics and the alarms generated by Cloud Eye for AS.

Namespace

SYS.AS

Metrics

Metric	Name	Description	Value Range	Remarks
cpu_util	CPU Usage	Average CPU usage of all instances in a monitored object	≥ 0%	The monitored object is an AS group.
mem_util	Memory Usage	Average memory usage of all instances in a monitored object	≥ 0%	The monitored object is an AS group. **NOTE** This metric is unavailable if the image has no installed.

Metric	Name	Description	Value Range	Remarks
network_incoming_bytes_rate_inband	Inband Incoming Rate	Average number of incoming bytes per second on all instances in a monitored object	≥ 0	The monitored object is an AS group.
network_outgoing_bytes_rate_inband	Inband Outgoing Rate	Average number of outgoing bytes per second on all instances in a monitored object	≥ 0	The monitored object is an AS group.
instance_num	Number of Instances	Number of available instances in a monitored object	≥ 0	The monitored object is an AS group. Available ECSs are **INSERVICE** instances in an AS group.
disk_read_bytes_rate	Disks Read Rate	Number of bytes read from all instances in a monitored object per second	≥ 0	The monitored object is an AS group.
disk_write_bytes_rate	Disks Write Rate	Number of bytes written to all instances in a monitored object per second	≥ 0	The monitored object is an AS group.
disk_read_requests_rate	Disk Read Requests	Number of read requests sent to all instances in a monitored object per second	≥ 0	The monitored object is an AS group.
disk_write_requests_rate	Disks Write Requests	Number of write requests sent to all instances in a monitored object per second	≥ 0	The monitored object is an AS group.

☐ **NOTE**

For details about whether your OS supports the **Memory Usage**, **Inband Outgoing Rate**, and **Inband Incoming Rate** metrics, see *Elastic Cloud Server User Guide*.

Dimension

Key	Value
AutoScalingGroup	AS group ID

A.2 Error Codes

Description

This section provides the meanings of error codes returned by AS APIs.

Example of Returned Error Information

{"error":{"code":"AS.0001","message":"System error."}}

Error Code Description

If an error code starting with **APIGW** is returned after you call an API, rectify the fault by referring to the instructions provided in **API Gateway Error Codes**.

HTTP Status Code	Error Code	Error Message	Description	Solution
500	AS.0001	System error.	System error.	Try again later or contact technical support.
500	AS.0049	Call IAM failed.	Failed to call the IAM API.	Try again later or contact technical support.
400	AS.0002	Request body is null.	The message body is empty.	Enter a valid message body.
401	AS.0005	The token of the header in the request is null.	The header in the request carries no or an empty token.	Enter a valid token.
401	AS.0006	The token of the header in the request is incorrect.	The header in the request carries an incorrect, invalid, or expired token.	Enter a valid token.
404	AS.0007	The requested resource [%s] could not be found.	The requested resources are not found.	Use the correct URL parameter.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.0008	Incorrect ProjectID.	The **project id** value carried in the URL is different from that resolved from the token.	Check whether the parameter in the URL matches that in the token.
403	AS.0011	You do not have the rights to perform the operation.	You do not have the rights to perform the operation.	Check whether your user roles include **te_admin**, **as_adm**, and other required roles.
403	AS.0012	The user role is suspended.	Your rights to perform the operation have been frozen.	Check whether your user roles include **op_suspended**, the frozen one.
403	AS.0013	Your rights to perform the operation are disabled.	Your rights to perform the operation are disabled.	Check whether your user roles include **op_restricted**, the restricted one.
400	AS.0022	Request body error	The request is invalid.	Check whether the request body is in standard JSON format or whether an unsupported parameter exists.
400	AS.0026	Scaling action is not allowed in the cooling duration.	No scaling action is allowed in the cooldown period.	Try again later.
400	AS.0031	Policy does not allow [%s] to be performed.	Fine-grained authentication failed because no authentication item is specified.	Add the required authorization item.
404	AS.0033	The api version is illegal, only v1 and v2.	Invalid API ID.	Enter a correct API ID.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.0034	Failed to execute the policy because the AS group is in active state.	Failed to trigger the AS policy because a scaling action in the AS group is in progress.	An AS policy can be automatically triggered only when there is no in-progress scaling action in the AS group. Try again later.
400	AS.0050	Scaling action failed. Max. instances reached.	Failed to expand the capacity because the maximum number of instances allowed for the AS group was reached.	Modifying the setting of the maximum number of instances.
400	AS.1001	The value of parameter Start number is invalid.	The **start number** value is invalid.	Enter a valid **start number** value.
400	AS.1002	The value of parameter Limit is invalid.	The **limit** value is invalid.	Enter a valid **limit** value.
400	AS.1003	The AS configuration ID is null.	The AS configuration ID is empty.	Add an AS configuration ID.
400	AS.1004	The AS configuration does not exist.	The AS configuration does not exist.	Use a correct AS configuration ID.
400	AS.1006	The AS configuration is in use.	The AS configuration is being used by an AS group and cannot be deleted.	Change this AS configuration for the AS group to another one and delete the AS configuration.
400	AS.1007	The AS configuration name is null.	The AS configuration name is empty.	Add an AS configuration name.
400	AS.1008	The AS configuration name is too long.	The AS configuration name is too long.	Use an AS configuration name of proper length.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.1009	The AS group ID is null.	The AS group ID is not specified.	Add an AS group ID.
400	AS.1011	The instance configuration information is null.	The **instance_config** field is not specified.	Enter a valid **instance_config** value.
400	AS.1014	The image ID in the AS configuration is null.	The image ID is not specified.	Add an image ID.
400	AS.1015	The image in the AS configuration does not exist.	The image in the AS configuration does not exist.	Use a correct image ID.
400	AS.1016	The specification ID in the AS configuration cannot be null.	The flavor ID is not specified.	Add a flavor ID.
400	AS.1017	The specification [%s] in the AS configuration does not exist.	The flavor of the AS configuration does not exist.	Use a correct flavor ID.
400	AS.1018	The specification [%s] and image is not match.	The flavor and image do not match.	Check whether the flavor matches the image. If not, modify the configuration.
400	AS.1019	The disk of this type is not applicable to the ECS.	The flavor and disk do not match.	Check whether the flavor matches the disk type. If not, change the resources.
400	AS.1021	The image in the AS configuration is not activated.	The image in the AS configuration is not activated.	Use a correct image ID.
400	AS.1022	The image in the AS configuration is not available.	The image in the AS configuration is unavailable.	Use a correct image ID.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.1023	Invalid AS configuration name.	The AS configuration name is invalid.	Use a valid AS configuration name.
400	AS.1024	The number of AS configurations exceeds the upper limit.	The number of AS configurations exceeds the upper limit.	Delete idle AS configurations or apply for a higher quota.
400	AS.1025	The user login mode in the AS configuration is not unique.	The user login mode in the AS configuration is not unique.	Use account-and-password or key-pair login mode only.
400	AS.1026	The user login mode in the AS configuration is empty.	The user login mode in the AS configuration is empty.	Use account-and-password or key-pair login mode only.
400	AS.1027	The scaling config personality is invalid.	The user AS configuration is invalid.	Enter a valid **personality** value.
400	AS.1028	The disk in the AS configuration is null.	The disk in the AS configuration is empty.	Enter a valid **disk** value.
400	AS.1029	The number of system disks in the AS configuration is invalid.	The number of system disks in the AS configuration is invalid.	Ensure that there is only one system disk.
400	AS.1030	The size of the system disk in the AS configuration is less than the specification required.	The size of the system disk in the AS configuration is smaller than the requirement.	Use a proper system disk size.
400	AS.1031	The size of the disk in the AS configuration is not correct.	The size of the disk in the AS configuration is invalid.	Use a proper disk size.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.1032	The ECS type [%s] in the AS configuration do not support 24 disks.	The number of disks in the AS configuration exceeds 24.	Ensure that the number of disks does not exceed the limit.
400	AS.1033	Parameter volumeType in the AS configuration is invalid.	The **volumeType** of the disk in the AS configuration is invalid.	Use a valid **volume_type** value.
400	AS.1034	Parameter diskType in the AS configuration is invalid.	The **diskType** in the AS configuration is invalid.	Use a valid **disk_type** value.
400	AS.1035	Parameter adminPass in the AS configuration is invalid.	The password in the AS configuration fails to meet the complexity requirements.	Use passwords that meet complexity requirements.
400	AS.1036	32-bit operating system (OS) does not support the specification [%s] with 4G memory.	The memory of 32-bit OS exceeds 4 GB.	Change the image or the policy.
400	AS.1037	The flavorRef in the AS configuration is not available.	The flavor is unavailable. For details, see the error information.	Change another flavor.
400	AS.1038	Batch deleting the AS configuration failed.	Deleting AS configurations in batches fails.	If this error code is returned, use parameter **Message** to obtain the configuration ID and the failure cause.
400	AS.1039	The number of AS configurations is beyond the maximum limit.	The number of AS configurations to be deleted in batches exceeds the upper limit.	Delete a maximum of 50 AS configurations at a time.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.1040	The list of AS config to be deleted is null.	The AS configuration list is empty.	Add the IDs of the AS configurations to be deleted in batches.
400	AS.1041	The eip info of scaling config is null.	The **eip** field in the **public_ip** field is empty.	Ensure that the **eip** field is not empty when specifying the **public_ip** field.
400	AS.1042	The bandwidth size of eip is invalid.	The bandwidth size is invalid.	Enter a valid bandwidth.
400	AS.1043	The eip type of scaling config is invalid.	The EIP type is invalid.	Use a valid EIP type.
400	AS.1044	The bandwidth charging mode of eip is invalid.	The bandwidth billing model of the AS configuration is invalid.	Use a valid bandwidth billing model.
400	AS.1045	The bandwidth type of eip is invalid.	The bandwidth type is invalid.	Use a valid bandwidth.
400	AS.1046	The bandwidth size of eip is null.	The bandwidth size is not specified.	Add the bandwidth value of the AS configuration.
400	AS.1047	The bandwidth charging mode of eip is null.	The bandwidth billing model is not specified.	Specify a proper bandwidth billing model.
400	AS.1048	The bandwidth id of eip is null.	The shared bandwidth ID of the AS configuration is not specified.	Add the shared bandwidth ID.
400	AS.1049	Parameter userdata in the AS configuration is invalid.	Parameter **userdata** in the AS configuration is invalid.	Use a valid **userdata**.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.1050	The user login mode in the AS configuration is illegal.	The user login mode in the AS configuration is invalid.	Use a valid login mode.
400	AS.1052	Parameter metadata in the AS configuration is invalid.	The **metadata** in the AS configuration is invalid.	Use a valid **metadata**, whose maximum length is 512 bytes and the **key** value cannot contain spaces, $, or periods(.).
400	AS.1053	The data image is not available.	The data image in the AS configuration is unavailable.	Use a valid data image.
400	AS.1054	The size of the data disk in the AS configuration is less than the data image required.	The size of the data disk in the AS configuration is smaller than what the data image requires.	Use a proper data disk.
400	AS.1055	The system disk is not support to data image.	A data disk image cannot be used to create a system disk.	Refer to the error code description.
400	AS.1056	The data image in the AS configuration does not exist.	The data image in the AS configuration does not exist.	Use a valid data image ID.
400	AS.1057	The DSS of the disk in the AS configuration is not available.	The selected DSS device is unavailable.	Use a correct DSS device.
400	AS.1058	The type of dss in the AS configuration is incorrect.	The selected DSS device does not support the disk type.	Change the DSS device or disk type.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.1059	The capacity of dss in the AS configuration is not enough.	The storage space on the selected DSS device is insufficient.	Change the DSS device.
400	AS.1060	DSS and EVS are used together in the AS configuration.	You can use either DSS or EVS disks in an AS configuration.	Refer to the error code description.
400	AS.1061	The DSS does not belong to the same AZ in the AS configuration.	The selected DSS devices must be in the same AZ.	Change DSS devices so that they are in the same AZ.
400	AS.1062	The number of EVS disks with snapshot IDs in the AS configuration is different from that of EVS disks specified in the full-ECS image.	The number of disks with snapshot IDs in the AS configuration is different from that of EVS disks specified in the full-ECS image.	Refer to the error code description.
400	AS.1063	The disk data backup in a full-ECS image cannot be used to restore the disk in DSS.	The disk data backup in a full-ECS image is used to restore the disk in DSS.	Refer to the error code description.
400	AS.1064	The data disk you have selected will be restored using the disk data backup in the full-ECS image. Then, data mirroring will be unavailable.	Your selected data disk will recover from the disk backup in the full-ECS image, and data mirroring is unavailable now.	Refer to the error code description.
400	AS.1065	ECS resources specified in the AS configuration belong to different AZs.	The VMs in the AS configuration do not belong to the same AZ.	Use ECS resources (specifications, images, disk) in the same AZ.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.1066	The AS configuration contains EVS disks with invalid snapshot IDs.	The AS configuration contains EVS disks with invalid snapshot IDs.	Use a correct snapshot ID.
400	AS.1067	The value of parameter Offset number is invalid.	Parameter **offset** is invalid.	Use a valid **offset** value.
400	AS.1068	The server group in the AS configuration does not exist.	The ECS group in the AS configuration does not exist.	Use the ID of an existing ECS group.
400	AS.1069	The maximum number of ECSs has been reached for the ECS group.	The maximum number of ECSs has been reached for the ECS group.	Change to another ECS group ID.
400	AS.1070	The bandwidth id of eip does not exist.	The shared bandwidth of the AS configuration does not exist.	Use an existing shared bandwidth ID.
400	AS.1071	Parameter tenancy in the AS configuration is invalid.	Parameter **tenancy** in the AS configuration is invalid.	Use a valid **tenancy** value.
400	AS.1072	The server group ID is invalid.	The ECS group ID in the AS configuration is invalid.	Change to a correct ECS group ID.
400	AS.1073	The dedicated host id does not exist.	DeH ID in the AS configuration does not exist.	Use the ID of an existing DeH.
400	AS.1074	The value of parameter Marker is invalid.	Parameter **marker** is invalid.	Use a valid **marker** value.
400	AS.1075	The image ID is invalid.	Image ID in the AS configuration is invalid.	Use a correct image ID.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.1076	The bandwidth id of eip is invalid.	Shared bandwidth ID in the AS configuration is invalid.	Enter a correct shared bandwidth ID.
400	AS.1077	No available dedicated host resource.	No DeH available.	Create a DeH or restore an existing DeH.
400	AS.1078	The dedicated host has insufficient available capacity for [%s].	The selected DeH does not have sufficient capacity.	Allocate a DeH or use another DeH.
400	AS.1079	No dedicated host resources supporting this type [%s] of ECS.	No DeH that supports this type of ECSs is available.	Change the type of ECSs in the AS configuration.
400	AS.1080	No dedicated host resources supporting the AZ [%s] you selected.	No DeH is available in the AZ.	Change the AZ of the AS group or create a DeH in the AZ.
400	AS.1081	This specification [%s] does not support IPv6.	The AS configuration does not support IPv6 addresses.	Change the AS configuration.
400	AS.1082	Bandwidth type is not shared.	The bandwidth is not shared.	Use a shared bandwidth.
400	AS.1083	Instance marketing type is illegal.	The billing model in the AS configuration is invalid.	Use a valid **market_type** value.
400	AS.1084	Failed to query the price of specification [%s] from CBC.	Failed to query the spot pricing or pay-per-use flavor price.	Change the flavor in the AS configuration or contact technical support.
400	AS.1085	Invalid multi flavor priority policy.	The priority policy used in multi-flavor AS configuration is invalid.	Use a valid **multi_flavor_priority_policy** value.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.1086	AS configuration is not available for AS group	The AS configuration is unavailable.	Replace the AS configuration in the AS group.
400	AS.1087	The number of flavors in the AS config exceeds the upper limit.	The number of flavors in the AS configuration reaches the upper limit.	Ensure that the number of flavors in the AS configuration does not exceed the upper limit.
400	AS.1088	The image in the AS configuration you selected is unavailable for the AZ [%s] in AS group.	The image in the AS configuration is not available in the AZ of the AS group.	Change another AS configuration or AZ for the AS group.
400	AS.1090	Flavor {0} in the AS configuration is incompatible with the image architecture.	The selected flavor is incompatible with the image architecture.	Ensure that the selected flavor is compatible with the image architecture.
400	AS.2002	The name of the AS group is null.	The AS group name is empty.	Add an AS group name.
400	AS.2003	The AS group name is too long.	The AS group name is too long.	Use an AS group name of proper length.
400	AS.2004	Invalid min or max number of instances in the AS group.	The maximum or minimum number of instances is invalid.	Enter correct maximum/ minimum number of instances for the AS group.
400	AS.2005	The expected number cannot be less than the minimum number of instances or greater than the maximum number of instances.	The expected number of instances in the AS group is invalid.	Enter a valid number of expected instances for the AS group.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.2006	Invalid cooldown period of the AS group.	The cooldown period in the AS group is invalid.	Enter a valid cooldown period for the AS group.
400	AS.2007	The AS group does not exist.	The AS group does not exist.	Use a correct AS group ID.
400	AS.2008	Invalid execution action of the AS group.	The scaling action of the AS group is invalid.	Use a correct scaling action for the AS group.
400	AS.2009	The AS group ID is null.	The AS group ID is not specified.	Add an AS group ID.
400	AS.2010	The expected number of instances in the AS group cannot be smaller than the number of instances for which instance protection has been configured.	The expected number of instances in the AS group cannot be smaller than the number of instances for which instance protection has been configured.	Ensure that the number of expected instances is no less than the protected instances, or change the expected number of instances after canceling instance protection.
400	AS.2011	Invalid AZ in AS group.	The AZ in the AS group is invalid.	Use a valid value.
400	AS.2012	The VPC of the AS group does not exist.	The VPC of the AS group does not exist.	Use a valid value.
400	AS.2013	Parameter networks in the AS group is invalid.	Parameter **networks** in the AS group is invalid.	Use a valid value.
400	AS.2014	The security group of the AS group does not exist.	The security group of the AS group does not exist.	Use a valid value.
400	AS.2015	Parameter listenerId in the AS group is invalid.	The load balancer listener of the AS group is invalid.	Use a valid value.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.2016	The listener of the AS group does not belong to the vpc.	The VPC to which the ELB listener in the AS group belongs is different from the VPC in the AS group.	Change the VPC ID or ELB listener ID.
400	AS.2017	The ID of the VPC in the AS group is null.	The VPC ID in the AS group is not specified.	Add a VPC ID.
400	AS.2018	No AS configuration is in the AS group.	No AS is configured in the AS group.	Enable the AS group after adding an AS configuration to the AS group.
400	AS.2019	The value of the parameter that specifies whether to forcibly delete an AS group is invalid.	The value of the parameter that specifies whether to forcibly delete an AS group is invalid.	Use a valid value.
400	AS.2020	The scaling group status is illegal.	The AS group status is invalid.	You are not allowed to perform the operation when the AS group is in the current status.
400	AS.2021	The current number of instances in the AS group is not 0.	Deleting the AS group fails because there are instances in it.	Before deleting the AS group, deleting its instances.
400	AS.2022	The AS group name contains invalid characters.	The AS group name contains invalid characters.	Use a correct AS group name.
400	AS.2023	The number of AS groups exceeds the upper limit.	The number of AS groups exceeds the upper limit.	Delete idle AS groups or apply for a higher quota.
400	AS.2024	The number of subnets in the AS group exceeds the upper limit.	The number of subnets in the AS group exceeds the upper limit.	Ensure that the number of subnets does not exceed the upper limit.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.2025	The number of security groups in the AS group exceeds the upper limit.	The number of security groups in the AS group exceeds the upper limit.	Ensure that the number of security groups does not exceed the upper limit.
400	AS.2026	The type of listeners in the AS group is not unique.	There are ELB listeners of different types in the AS group.	**lb_listener_id** is alternative to **lbaas_listeners**.
400	AS.2027	The subnet of the AS group does not belong to the vpc.	The VPC to which some subnets in the AS group belong is different with the VPC in the AS group.	Change the VPC ID or subnet.
400	AS.2028	The modified expected number of instances is the same as the original number.	The new expected number of instances is the same as the original number.	Refer to the error code description.
400	AS.2029	Invalid health check method of the AS group.	The health check method for instances in the AS group is incorrect.	Use a valid **health_periodic_audit_method** value.
400	AS.2030	You are not allowed to modify the AZ, subnet, and security information when the number of instances in the AS group is not 0, the AS group is scaling, or the AS group is in Inservice status.	You are not allowed to modify the AZ, subnet, or security group information when there are instances in the AS group, the AS group is scaling, or the AS group is in **Inservice** state.	Check the number of instances in the AS group and the status of the AS group, or try again later.
400	AS.2031	Invalid health check period of the AS group.	The health check period of the AS group is invalid.	Use a valid **health_periodic_audit_time** value.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.2032	Invalid instance removal policy.	The instance removal policy for the AS group is invalid.	Use a valid **instance_terminate_policy** value.
400	AS.2033	You are not allowed to perform the operation when the AS group is in current [%s] status.	You are not allowed to perform the operation when the AS group is in the current status.	Refer to the error code description.
400	AS.2034	Invalid notification method of the AS group.	The notification method for the AS group is invalid.	Use a valid notification method.
400	AS.2035	The number of instances manually added to the AS group exceeds the maximum number of the instances required in the AS group.	The number of ECSs in the AS group is greater than the upper limit because some ECSs are manually added.	Add a proper number of ECSs or increase the maximum number of instances in the AS group.
400	AS.2036	The number of instances manually deleted is less than the minimum number of the instances required in the AS group.	The number of ECSs in the AS group is smaller than the lower limit because some ECSs are manually deleted.	Delete a proper number of ECSs or decrease the minimum number of instances in the AS group.
400	AS.2037	The number of listeners in the AS group exceeds the upper limit.	The number of ELB listeners in the AS group reaches the upper limit.	Select a proper number of load balancer listeners.
400	AS.2038	The type [%s] of ECS in the AZ you selected has been sold out.	The ECSs of this type have been sold out in the AZ specified for this AS group.	Refer to the error code description. Change the AZ of the AS group or change the AS configuration for the AS group.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.2039	Parameter **protocolPort** of the AS group is invalid.	Parameter **protocolPort** of the AS group is invalid.	Use a valid **protocolPort**.
400	AS.2040	Parameter **weight** of the AS group is invalid.	Parameter **weight** of the AS group is invalid.	Use a valid **weight**.
400	AS.2042	Parameter pool of lbaas in the AS group is invalid.	The load balancer pool in the AS group is invalid.	Use a valid **pool**.
400	AS.2043	There is not a valid volume in the AZ [%s] you selected.	Storage resources of this type are sold out or do not exist in the AZ specified for this AS group.	Refer to the error code description. Change the AZ of the AS group or change the AS configuration for the AS group.
400	AS.2044	The AZ in the AS group is not available.	The AZ in the AS group is invalid.	Refer to the error code description. Change the AZ of the AS group.
400	AS.2045	The min or max number of instances in the AS group exceeds the upper limit.	The minimum or maximum number of instances in the AS group exceeds the limit.	Enter proper maximum and minimum numbers of instances for the AS group.
400	AS.2046	Invalid health check grace period of the AS group.	The grace period for the instance health check is invalid.	Use a valid **health_periodic_audit_grace_period** value.
400	AS.2047	The AS group is in active status.	Failed to modify load balancer parameters because a scaling action is ongoing.	Wait until the scaling action is complete and modify the load balancer parameters again.
400	AS.2048	This subnet does not support IPv6.	The subnet does not support IPv6 addresses.	Change to a subnet that supports IPv6 or disable IPv6.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.2049	The AZ in the AS group does not support IPv6.	The AZ does not support IPv6 addresses.	Change to an AZ that supports IPv6 or disable IPv6.
400	AS.2050	IPv6 shared bandwidth can be used only after IPv6 is enabled.	IPv6 shared bandwidth can be used only after IPv6 is enabled.	Enable IPv6 and then use the IPv6 bandwidth.
400	AS.2051	The expected number cannot be less than the number of instances moved into the standby state.	The number of expected instances cannot be less than that of standby instances.	Ensure that the number of expected instances is not less than that of standby instances (including instances that are entering the standby mode and those that are already in standby mode).
400	AS.2052	The expected number cannot be less than the sum of the number of standby instances and protected instances.	The number of expected instances cannot be less than the total of standby and protected instances.	Ensure that the number of expected instances is not less than the total of standby (including instances that are entering the standby mode and those that are already in standby mode) and protected instances.
400	AS.2053	Invalid multi az priority policy.	The priority policy used for multiple AZs in the AS group is invalid.	Change the priority policy used for multiple AZs in the AS group.
400	AS.2054	The AS group is in active status.	Failed to change the AZ because a scaling action is ongoing.	Wait until the scaling action is complete and change the AZ again.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.3002	Invalid AS policy type.	The AS policy type is invalid.	Use a valid **scaling_policy_type** value.
400	AS.3003	The information about the AS policy is null.	When the AS policy is scheduled or periodic, parameter **scheduled_policy** is empty.	Use a valid **scheduled_policy** value.
400	AS.3004	Invalid recurrence type in the AS policy.	The period type is incorrect.	Use a valid **recurrence_type** value.
400	AS.3005	The end time of the scaling action triggered periodically is empty.	The end time is not specified for a periodic AS policy.	Enter a valid **end_time** value.
400	AS.3006	The format of the end time for the scaling action triggered periodically is incorrect.	The format of the end time for the periodically triggered scaling action is incorrect.	Use a correct format for the end time.
400	AS.3007	The end time of the scaling action triggered periodically must be later than the current time.	The end time of the scaling action triggered periodically must be later than the current time.	Ensure that the end time is later than the current time.
400	AS.3008	Parameter lanchTime in the AS policy is null.	The triggering time is not specified.	Enter a valid **launch_time** value.
400	AS.3009	The format of parameter lanchTime is incorrect.	The triggering time format is incorrect.	Use a correct triggering time format.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.3010	The triggering time of the scheduled policy must be later than the current time.	The triggering time of the scaling action triggered at a scheduled time must be later than the current time.	Ensure that the triggering time of the scheduled policy is later than the current time.
400	AS.3011	The AS policy type is null.	The AS policy type is not specified.	Enter a valid **scaling_policy_type** value.
400	AS.3012	Invalid cooldown period in the AS policy.	The cooldown period in the AS policy is invalid.	Enter a valid **cool_down_time** value.
400	AS.3013	The AS policy name is null.	The AS policy name is not specified.	Enter a valid **scaling_policy_name** value.
400	AS.3014	The length of the AS policy name is invalid.	The length of the AS policy name is invalid.	Enter a valid **scaling_policy_name** value.
400	AS.3015	The action in the AS policy is null.	The execution action in the AS policy is not specified.	Enter a valid **scaling_policy_action** value.
400	AS.3016	The operation to perform the action in the AS policy is null.	The operation to perform the execution action in the AS policy is not specified.	Enter a valid **operation** value.
400	AS.3017	The operation to perform the action in the AS policy action is invalid.	The operation to perform the action in the AS policy is invalid.	Enter a valid **operation** value.
400	AS.3018	The number of instances which action in the AS policy operates on is invalid.	The number of instances to which the AS policy applies is invalid.	Enter a valid **instance_number** value.
400	AS.3019	The AS group ID in the AS policy cannot be null.	The AS group ID in the AS policy is not specified.	Add an AS group ID.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.3020	The AS policy does not exist.	The AS policy does not exist.	Use a correct AS policy ID.
400	AS.3021	The AS policy ID cannot be null.	The AS policy ID is not specified.	Add an AS policy ID.
400	AS.3022	The action of the AS policy request body is invalid.	The action of the AS policy request body is invalid.	Use a valid **action** value.
400	AS.3023	The period type of the AS policy is null.	The period type of the AS policy is empty.	Use a valid **recurrence_type** value.
400	AS.3024	The value of the period type of the AS policy is null.	The value of the periodically triggered tasks of the AS policy is empty.	Add a valid **recurrence_value** value.
400	AS.3025	The value of period type of the AS policy is invalid.	The period type of the AS policy is invalid.	Use a valid **recurrence_type** value.
400	AS.3026	The alarm ID in the AS policy is null.	The alarm ID in the AS policy is empty.	Add an alarm ID.
400	AS.3027	The AS policy must be in the inservice status when the AS policy is performed.	The AS group must be in service when the AS policy is performed.	Enable the AS group and try again.
400	AS.3028	The format of the start time for the scaling action triggered periodically is incorrect.	The format of the start time for the periodically triggered scaling action is incorrect.	Use a correct format for the start time.
400	AS.3029	The start time of the scaling action triggered periodically must be earlier than the end time.	The start time of the periodically triggered scaling action must be earlier than the end time.	Ensure that the start time of the periodic policy is earlier than the end time.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.3030	The alarm in the AS policy does not exist.	The alarm rule in the AS policy does not exist.	Modify the alarm rule used by the AS policy.
400	AS.3031	Invalid AS policy name.	The AS policy name is invalid.	Enter a valid **scaling_policy_name** value.
400	AS.3032	The number of AS policies exceeds the upper limit.	The number of AS policies exceeds the upper limit.	Delete idle AS policies or apply for a higher quota.
400	AS.3033	The triggering time of the periodic policy is not included in the effective time of the policy.	The triggering time of the periodic policy falls outside the effective time range of the policy.	Ensure that the triggering time of the periodic policy is within the range from the start time to the end time.
400	AS.3034	The alarm ID in the AS policy is being used by another AS group.	The alarm ID in the AS policy is being used by another AS group.	Refer to the error code description. An alarm ID can be used only by the AS policy in one AS group at a time.
400	AS.3035	The percentage of instances which action in the AS policy operates on is invalid.	The percentage of instances to which the AS policy applies is invalid.	Use a valid **instance_percentage** value.
400	AS.3036	The action in the AS policy operates is not unique.	The action in the AS policy operates is not unique.	Select one from **instance_percentage** or **instance_number**.
400	AS.3037	The scaling resource type in the AS policy is invalid.	The resource type in the AS policy is invalid.	Use a valid **scaling_resource_type** value.
400	AS.3038	The AS policy is in executing status.	The AS policy is being executed and cannot be executed again.	Try again later.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.3040	The adjustment by policy reached the limit	The number of modifications to scaling resources in the AS policy has reached the upper limit.	Refer to the error code description.
400	AS.3041	The scaling resource ID in the AS policy is null.	The scaling resource ID in the AS policy is not specified.	Enter a valid AS resource ID in the AS policy.
400	AS.3042	The scaling resource in the AS policy does not exist.	The scaling resource in the AS policy does not exist.	Enter a valid AS resource ID in the AS policy.
400	AS.3043	The limit which action in the AS policy operates on is invalid.	The value of parameter **limits** in the AS policy is invalid.	Use a valid **limits** value in the AS policy.
400	AS.3044	Failed to adjust the bandwidth of EIP because the EIP is charged by month or year.	Bandwidth billed in yearly/monthly mode cannot be dynamically changed.	Select a valid bandwidth.
400	AS.3045	Failed to delete policies in a batch.	Failed to delete policies in batches.	If this error code is returned, use parameter **Message** to obtain the policy ID and the failure cause.
400	AS.3046	Failed to resume policies in a batch.	Failed to enable policies in batches.	If this error code is returned, use parameter **Message** to obtain the policy ID and the failure cause.
400	AS.3047	Failed to pause policies in a batch.	Failed to disable policies in batches.	If this error code is returned, use parameter **Message** to obtain the policy ID and the failure cause.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.3048	The value of the parameter that specifies whether to forcibly delete the policy is invalid.	The value of the parameter that specifies whether to forcibly delete the policy is invalid.	Use a valid **force_delete** value.
400	AS.3049	The list of AS policies to be batched is empty.	The list of AS policies on which a batch operation is to be performed is empty.	Add the IDs of the AS policies to be operated in batches.
400	AS.3050	The alarm ID in the AS policy is illegal.	The format of the alarm ID in the AS policy is incorrect.	Use an alarm ID in correct format.
400	AS.3054	The scaling resource type in the AS policy is null.	The scaling resource type in the AS policy cannot be left blank.	Use a valid **scaling_resource_type** value.
400	AS.3055	The scaling resource ID in the AS policy is format wrong.	The scaling resource ID in the scaling policy is invalid.	Enter a valid AS resource ID in the AS policy.
400	AS.3056	The value of the parameter that specifies whether to delete the alarm in the AS policy is invalid.	The value of the alarm rule used for deleting the scaling policy is invalid.	Use a valid **delete_alarm** value.
400	AS.3057	The value of parameter sort_by in the request is invalid.	The **sort_by** value in the request is invalid.	Use a valid **sort_by** value.
400	AS.3058	The value of parameter order in the request is invalid.	The **order** value in the request is invalid.	Use a valid **order** value.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.4000	The value of parameter start_number in the request for the instance is invalid.	The **start_number** value in the instance request is invalid.	Use a valid **start_number** value.
400	AS.4001	The value of parameter limit in the request for the instance is invalid.	The **limit** value in the instance request is invalid.	Use a valid **limit** value.
400	AS.4003	The value of parameter life_cycle_state in the instance request is invalid.	The **life_cycle_state** value in the instance request is invalid.	Use a valid **life_cycle_state** value.
400	AS.4004	The value of parameter health_status in the request for the instance is invalid.	The **health_status** value in the instance request is invalid.	Use a valid **health_status** value.
400	AS.4005	Parameter scaling_group_id in the request for the instance does not exist.	The **scaling_group_id** in the instance request does not exist.	Use a correct **scaling_group_id**.
400	AS.4006	The instance does not exist.	The instance does not exist.	Use a correct instance ID.
400	AS.4007	The value of the parameter that specifies whether to delete the instance is invalid.	The value of the parameter that specifies whether to delete the instance is invalid.	Use a valid value.
400	AS.4008	The start time format of the log about the expected number of the instances is incorrect.	The start time format of the log about the expected number of the instances is incorrect.	Use a correct format.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.4009	The end time format of the log about expected number of the instances is incorrect.	The end time format of the log about expected number of the instances is incorrect.	Use a correct format.
400	AS.4010	Parameter start_number in the request for the log about the expected number of instances is invalid.	The **start_number** in the request for the log about the expected number of instances is invalid.	Use a valid **start_number** value.
400	AS.4011	The value of parameter limit in the request for the log about the expected number of instances is invalid.	The value of **limit** in the request for the log about the expected number of instances is invalid.	Use a valid **limit** value.
400	AS.4012	The value of parameter logId in the request for the log about the expected number of instances is invalid.	The **logId** in the request for the log about the expected number of instances is invalid.	Use a valid **logId** value.
400	AS.4013	The list of instances to be deleted is null.	The list of instances to be deleted is empty.	Add instances to be deleted.
400	AS.4014	The instances do not belong to the same AS group.	The instances do not belong to the same AS group.	Select instances in the same AS group.
400	AS.4015	The instance is not in the inservice status.	The instance is not in **inservice** state.	Select an **inservice** instance.
400	AS.4016	Failed to delete the instance because the instance is charged by month or year.	The instance cannot be deleted because it is charged by month or year.	Refer to the error code description.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.4017	The requested instance is null.	The requested instance is empty.	Enter a valid instance.
400	AS.4018	The action of the body in the request to operate the instance is invalid.	The value of the request body action of the batch instance operation is invalid.	Use a valid value.
400	AS.4019	The list of instances to be added to the AS group is empty.	The list of instances to be added to the AS group is empty.	Enter a valid instance.
400	AS.4020	The AZ to which the instance belongs is not within the AZ in the AS group.	The AZ to which the instance belongs is different from the AZ to which the AS group belongs.	Select a proper instance for the AZ.
400	AS.4021	The VPC to which the instance belongs is different from the VPC in the AS group.	The VPC to which the instance belongs is different from the VPC in the AS group.	Select a proper instance for the VPC.
400	AS.4022	The number of instances added to the AS group exceeds the upper limit.	The number of instances added to the AS group exceeds the upper limit.	Add a proper number of instances.
400	AS.4023	The added instance has already existed.	The added instance already exists.	Select another valid instance.
400	AS.4024	The instance is not in the active status.	The added instance is not in the active state.	Select an **active** instance.
400	AS.4025	The value of the parameter that specifies whether to append new instance(s) is invalid.	Invalid value for determining whether to add new ECSs when ECSs enter the standby mode.	Use a valid value.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.4026	The number of instances deleted exceeds the upper limit.	The number of instances deleted exceeds the upper limit.	Delete a proper number of instances.
400	AS.4027	The added instance has already existed in other AS group.	The instance has already been added to another AS group.	Select another valid instance.
400	AS.4028	The AS instance ID cannot be null.	The instance ID cannot be left blank.	Use a correct instance ID.
400	AS.4029	Failed to add instances in a batch.	Failed to batch add instances.	If this error code is returned, use parameter **Message** to obtain the instance ID and the failure cause.
400	AS.4030	Failed to delete instances in a batch.	Failed to delete instances in batches.	If this error code is returned, use parameter **Message** to obtain the instance ID and the failure cause.
400	AS.4032	The list of instances is null.	The list of instances is empty.	Refer to the error code description.
400	AS.4033	Failed to set instance protection in a batch.	Failed to set instance protection in a batch.	If this error code is returned, use parameter **Message** to obtain the instance ID and the failure cause.
400	AS.4036	Failed to set instance enter standby in a batch.	Failed to set instances to standby mode.	If this error code is returned, use parameter **Message** to obtain the instance ID and the failure cause.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.4037	Failed to set instance exit standby in a batch.	Failed to cancel standby mode for instances.	If this error code is returned, use parameter **Message** to obtain the IDs of the instances and the failure cause.
400	AS.4038	The instance is not in the standby status.	The instance is not in standby mode.	Select a standby instance.
400	AS.4039	After adding new instances equal to the number of standby instances, the expected number cannot be larger than the max instance number of group.	The number of expected instances cannot be greater than the maximum number of instances after the instances with the same number of standby instances are added to the AS group.	Change the maximum number of instances.
400	AS.4043	The number of instances exceeds the upper limit.	The number of instances for batch operations exceeds the upper limit.	Ensure that the number of instances for batch operations is no more than 10 at a time.
400	AS.7003	called interface of VPC service failed	Failed to call APIs of the VPC service.	Try again later or contact technical support.
400	AS.7011	This DeC does not support ECSs of this type [%s].	This DeC does not support ECSs of this type.	Use other types of ECS specifications.
400	AS.7012	lblistener does not exist.	The ELB listener does not exist.	Modify the ELB listener information.
400	AS.7016	This DeC does not support the AZ [%s] you selected.	This DeC does not support this AZ.	Modify the AZ information.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.7019	The number of private IP addresses in the subnet is insufficient.	Private IP addresses in the subnet are insufficient.	Modify the subnet information and enable the AS group.
400	AS.7022	Keypair does not exist.	The SSH key of the AS configuration does not exist.	Replace the AS configuration in the AS group.
400	AS.7025	The topic urn is not valid.	The notification subject is invalid.	Use a valid notification subject.
400	AS.7026	The topic scene is not valid.	The notification scene is invalid.	Use a valid notification scene.
400	AS.7027	The topic of notification is null.	The notification subject is empty.	Add a notification subject.
400	AS.7028	The number of topics in the AS group exceeds the upper limit.	The number of notifications in the AS group exceeds the upper limit.	Add a maximum of five notifications.
400	AS.7029	The topic of notification is duplicate.	The notification subject is duplicate.	Use a correct notification subject.
400	AS.7030	Invalid lifecycle hook default timeout.	The lifecycle hook timeout duration is invalid.	Use a valid value.
400	AS.7031	Invalid lifecycle hook name.	The lifecycle hook name is invalid.	Use a valid value.
400	AS.7032	The name of the lifecycle hook is empty.	The lifecycle hook name is empty.	Add a lifecycle hook name.
400	AS.7033	Invalid lifecycle hook type.	The lifecycle hook type is invalid.	Use a valid value.
400	AS.7034	Invalid lifecycle hook callback action result.	The default callback action of the lifecycle hook is invalid.	Use a valid value.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.7035	The metadata of the lifecycle hook is too long.	The length of lifecycle hook metadata exceeds the maximum allowed.	Use a valid value.
400	AS.7036	The lifecycle hook is null.	The lifecycle hook is empty.	Use a valid value.
400	AS.7037	The type of the lifecycle hook is empty.	The lifecycle hook type is empty.	Use a valid value.
400	AS.7038	The number of hooks in the AS group exceeds the upper limit.	The number of lifecycle hooks exceeds the upper limit.	Add a maximum of five lifecycle hooks.
400	AS.7039	The lifecycle hook callback action result is empty.	The lifecycle hook callback action is empty.	Use a valid value.
400	AS.7040	The lifecycle hook callback object is empty.	The lifecycle hook callback object is empty.	Use a valid value.
400	AS.7041	The lifecycle hook callback object is empty.	The lifecycle hook name already exists.	Use a valid value.
400	AS.7042	The lifecycle hook callback object does not exist.	The lifecycle hook callback object does not exist.	Use a valid value.
400	AS.7043	The lifecycle hook topic urn does not exist.	The notification subject configured for your lifecycle hook does not exist.	Use a valid value. Check the notification subject configured for your lifecycle hook.
400	AS.7044	The tag of this resource is null	The tag of this resource is empty.	Use a valid value.
400	AS.7045	The number of tags exceeded.	The maximum number of tags has been reached.	Add a maximum of 10 tags.
400	AS.7046	The tags in the resource is invalid.	The tag is invalid.	Use a valid tag.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.7047	The value of tag in the resource is too long.	The tag value is too long.	Use a valid value.
400	AS.7048	The resource type in this operation with tag is invalid.	The resource type in this operation with tag is invalid.	Use a valid value.
400	AS.7049	The action in this operation with tag is invalid.	The action in this operation with tag is invalid.	Use a valid value.
400	AS.7050	The key of tag cannot be duplicate.	The key of tag is duplicate.	Use a valid value.
400	AS.7051	The backend ECS group in the AS group does not exist.	The backend ECS group in the AS group does not exist.	Use a valid value. Change the pool of ELB.
400	AS.7052	The matches in the resource is invalid.	The **matches** value is invalid.	Use a valid **matches** value.
400	AS.7054	The value of tag cannot be duplicate.	A key in the tag has duplicate values.	Check and change the duplicate values in the tag.
400	AS.7055	The metadata of the lifecycle hook has special character.	The lifecycle hook metadata contains invalid characters.	Use a valid value.
400	AS.7059	The enterprise project does not exist.	The selected enterprise project does not exist.	Use an existing enterprise project.
400	AS.7060	The enterprise project is unavailable.	The enterprise project is unavailable.	Use an available enterprise project.
400	AS.7061	The value of scaling tag is null.	The value of the tag is empty.	Use a valid value.
400	AS.7062	The key of scaling tag is null.	The key of the tag is empty.	Use a valid value.
400	AS.7063	The key of scaling tag is too long.	The tag key is too long.	Use a valid value.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.7065	The value of parameter enterprise_project_id in the request is invalid.	The request parameter **enterprise_project_id** is invalid.	Use a valid **enterprise_project_id**.
400	AS.7078	Failed to get the security group. Try again later or contact customer service.	Failed to call the VPC API for obtaining security groups.	Try again later or contact technical support.
400	AS.7079	Failed to get the image. Try again later or contact customer service.	IMS failed to respond to the request for querying an image.	Try again later or contact technical support.
400	AS.7081	The enterprise project is disabled and cannot be bound to resources.	Failed to bind resources to the enterprise project because the project is unavailable.	Check whether the enterprise project is enabled.
400	AS.7111	Insufficient instance quota.	Insufficient ECS quota.	Release idle ECSs or increase the ECS quota.
400	AS.7112	Insufficient volume quota.	Insufficient EVS disk quota.	Release idle ECSs or increase the EVS disk quota.
400	AS.7113	Insufficient elastic ip quota.	Insufficient EIP quota.	Release idle EIPs or increase the EIP quota.
400	AS.7114	Insufficient ram quota.	Insufficient ECS memory quota.	Release idle ECSs or increase the ECS memory quota.
400	AS.7115	Insufficient cpu quota.	Insufficient ECS vCPU quota.	Release idle ECSs or increase the ECS vCPU quota.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.7118	The maximum number of EIPs bounded to this shared bandwidth has been reached.	The maximum number of EIPs that can be bound to the shared bandwidth has been reached.	Change the shared bandwidth.
400	AS.8004	User resources are frozen.	User resources are frozen and cannot be operated.	Recharge your account, after which the system will automatically unfreeze your resources.
400	AS.9001	The format of the start time of the scaling activity log is incorrect.	The format of the start time of the scaling log is incorrect.	Use a valid value.
400	AS.9002	The format of the end time for the scaling action log is incorrect.	The format of the end time for the scaling log is incorrect.	Use a valid value.
400	AS.9003	The value of parameter start_number in the request for the scaling activity log is invalid.	The **start_number** in the request for the scaling log is invalid.	Use a valid value.
400	AS.9004	The value of parameter limit in the request for the scaling activity log is invalid.	The **limit** in the request for the scaling log is invalid.	Use a valid value.
400	AS.9005	The value of parameter log_id in the request for the scaling log is invalid.	The **logId** in the request for the scaling log is invalid.	Use a valid value.
400	AS.9007	The format of the execute time in the request is incorrect.	The time format of the AS policy execution log is incorrect.	Use a valid value.

HTTP Status Code	Error Code	Error Message	Description	Solution
400	AS.9008	The value of parameter start_number in the request is invalid.	Parameter **start_number** in the AS policy execution log is invalid.	Use a valid value.
400	AS.9009	The value of parameter limit in the request is invalid.	Parameter **limit** in the AS policy execution log is invalid.	Use a valid value.
400	AS.9010	The value of parameter log_id in the request is invalid.	Parameter **logId** in the AS policy execution log is invalid.	Use a valid value.
400	AS.9011	The value of parameter scaling_resource_id in the request is invalid.	The resource ID in the AS policy execution log is invalid.	Use a valid value.
400	AS.9012	The value of parameter type in the request for the scaling activity log is invalid.	The **type** in the request for the scaling action log is invalid.	Use a valid **type** value.
400	AS.9013	The value of parameter status in the request for the scaling activity log is invalid.	The **status** in the request for the scaling action log is invalid.	Use a valid value.