

# Auto Scaling

# API Reference

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# 1 Before You Start

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## 1.1 Overview

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*.

## 1.2 API Calling

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

In addition, AS provides software development kits (SDKs) of multiple programming languages for you to use.

## 1.3 Endpoints

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

## 1.4 Constraints

- The numbers of AS groups and AS configurations that you can create are determined by your quota. For details, see [What Is the AS Quota?](#)

- For more constraints, see API description.

## 1.5 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. For security purposes, create Identity and Access Management (IAM) users and grant them permissions for routine management.
- User

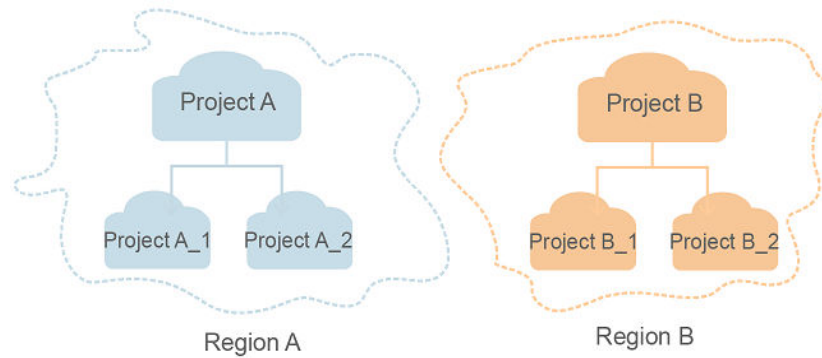
An IAM user is created by an account in IAM to use cloud services. Each IAM user has its own identity credentials (password and access keys).  
API authentication requires information such as the account name, username, and password.
- Region

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 to group and physically isolate resources (including computing, storage, and network resources) across regions. 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.

**Figure 1-1** Project isolation model



- **Enterprise project**  
Enterprise projects group and manage resources across regions. Resources in different enterprise projects are logically isolated. An enterprise project can contain resources of multiple regions, and resources can be added to or removed from enterprise projects.  
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 [obtaining a user token](#) as an example to demonstrate how to call an API. The obtained token can then be used to authenticate the calling of other APIs.

### Request URI

A request URI is in the following format:

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

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

**Table 3-1** URI parameter description

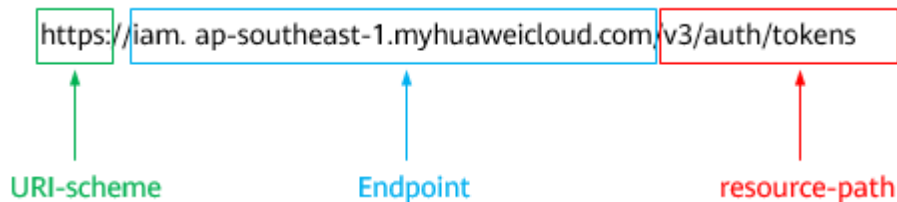
| Parameter     | Description   |
|---------------|---|
| URI-scheme    | Protocol used to transmit requests. All APIs use HTTPS.   |
| Endpoint      | Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from <a href="#">Regions and Endpoints</a> .<br>For example, the endpoint of IAM in region <b>CN-Hong Kong</b> is <b>iam.ap-southeast-1.myhuaweicloud.com</b> . |
| resource-path | Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the <b>resource-path</b> of the API used to obtain a user token is <b>/v3/auth/tokens</b> .  |

| Parameter    | Description   |
|--------------|---|
| query-string | Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of <i>Parameter name=Parameter value</i> . For example, <b>?limit=10</b> indicates that a maximum of 10 data records will be displayed. |

For example, to obtain an IAM token in the **CN-Hong Kong** region, obtain the endpoint of IAM (iam.ap-southeast-1.myhuaweicloud.com) for this region and the resource-path (/v3/auth/tokens) in the URI of the API used to **obtain a user token**. Then, construct the URI as follows:

```
https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
```

**Figure 3-1** Example URI



**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.   |

| Method | Description   |
|--------|---|
| PATCH  | Requests the server to update partial content of a specified resource.<br>If the resource does not exist, a new resource will be created. |

For example, in the case of the API used to [obtain a user token](#), the request method is **POST**. The request is as follows:

POST `https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens`

## Request Header

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

Common request header fields are as follows.

**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 <i>Hostname:Port number</i> . If the port number is not specified, the default port is used. The default port number for <b>https</b> is <b>443</b> . | No<br>This field is mandatory for AK/SK authentication. | code.test.com<br>or<br>code.test.com:443 |
| Content-Type   | Specifies the type (or format) of the message body. The default value <b>application/json</b> 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                                     |

| Parameter    | Description   | Mandatory   | Example Value  |
|--------------|---|---|--|
| X-Project-Id | Specifies the project ID. Obtain the project ID by following the instructions in <a href="#">Obtaining a Project ID</a> .   | No<br>This field is mandatory for requests that use AK/SK authentication in the Dedicated Cloud (DeC) scenario or multi-project scenario. | e9993fc787d94b6c886cbaa340f9c0f4   |
| X-Auth-Token | Specifies the user token. It is a response to the API for <a href="#">obtaining a user token</a> (This is the only API that does not require authentication).<br>After the request is processed, the value of <b>X-Subject-Token</b> in the response header is the token value. | No<br>This field is mandatory for token authentication.   | The following is part of an example token:<br>MIIPAgYJKoZlhvcNAQcCo...ggg1BBIINPXsidG9rZ |

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

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json
```

### (Optional) Request Body

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

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

In the case of the API used to [obtain a user token](#), the request parameters and parameter description can be obtained from the API request. The following provides an example request with a body included. Replace *username*,

*domainname*, *\$ADMIN\_PASS* (login password), and *xxxxxxxxxxxxxxxxxxxx* (project name) with the actual values. Obtain a project name from [Regions and Endpoints](#).

#### NOTE

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

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json
```

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
          "password": "$ADMIN_PASS", //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"
        }
      }
    }
  },
  "scope": {
    "project": {
      "name": "xxxxxxxxxxxxxxxxxxxx"
    }
  }
}
```

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

## 3.2 Authentication

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

- Token authentication: Requests are authenticated using tokens.
- 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

#### 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 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 to which the IAM user belongs
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "xxxxxxx" // 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 **ABCDEFJ....**, **X-Auth-Token: ABCDEFJ....** can be added to a request as follows:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

## 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.

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.

## 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 **obtain a user token**, the request is successful.

### Response Header

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

**Figure 3-2** shows the response header fields for the API used to **obtain a user token**. The **x-subject-token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

**Figure 3-2** Header fields of the response to the request for obtaining a user token

```

connection → keep-alive

content-type → application/json

date → Tue, 12 Feb 2019 06:52:13 GMT

server → Web Server

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

transfer-encoding → chunked

via → proxy A

x-content-type-options → nosniff

x-download-options → noopen

x-frame-options → SAMEORIGIN

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

x-subject-token
→ MIIYXQYJKoZIhvcNAQcCoIIYtjCCGEOCAQExDTALBglghkgBZQMEAgEwgharBgkqhkiG9w0BBwGgghacBIIWmHsidG9rZW4iOansiZXhwaXJlc19hdCI6IjpwMTktMDItMTNUMD
fj3KJs6YgKnpVNRbW2eZ5eb78SZOkqjACgkIqO1wi4JlGzrpd18LGXK5bdfq4lqHCYb8P4NaYONYejeAgz/VeFYtLWT1GSO0zxKZmlQHjQ82HBqHdglZO9fuEbL5dMhdavj+33wEI
xHRCe9I87o+k9-
j+CMZSEB7bUGd5Uj6eRASXl1jipPEGA270g1FruooL6jqglFkNPQuFSOU8+uSsttVwRtnfCs+qTp22Rkd5MCqFGQ8LcuUxC3a+9CMBnOintWW7oeRUvhVpxk8pxiX1wTEboX-
RzT6MUbpvGw-oPNFYxjECKnoH3HRozv0vN--n5d6Nbxg==

x-xss-protection → 1; mode=block;
    
```

### (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 is part of the response body for the API used to [obtain a user token](#). For the sake of limited space, only part of the content is displayed.

```
{
  "token": {
    "expires_at": "2019-02-13T06:52:13.855000Z",
    "methods": [
      "password"
    ],
    "catalog": [
      {
        "endpoints": [
          {
            "region_id": "az-01",
            .....

```

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

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

In the response body, **error\_code** is an error code, and **error\_msg** provides information about the error.

## 3.4 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/a4adasfjljaaakla12334jklga9sasfg"
      },
      "id": "a4adasfjljaaakla12334jklga9sasfg",

```

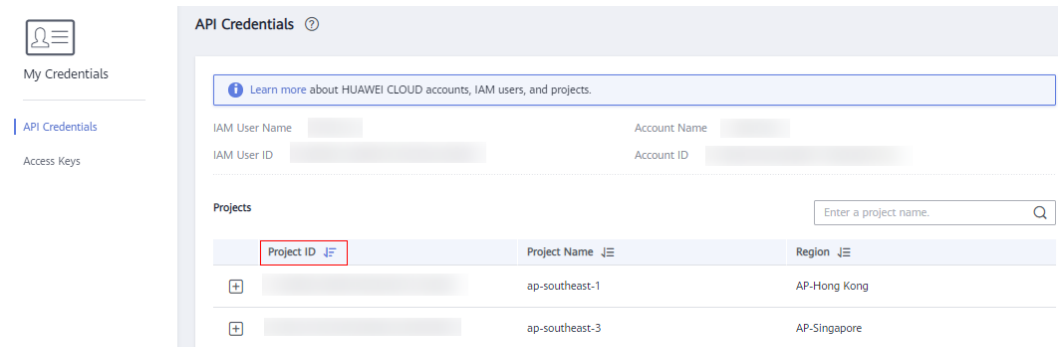
```
    "enabled": true
  }
],
"links": {
  "next": null,
  "previous": null,
  "self": "https://www.example.com/v3/projects"
}
```

## 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.

**Figure 3-3** Viewing the project ID



# 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. For details, see [Adding a Security Group Rule](#).
  - If you add multiple load balancers to an AS group, an instance is considered healthy only when all load balancers declare that it is healthy. If any load balancer detects that the instance is unhealthy, the instance will be removed from the AS group.
  - If you add a load balancer that has multiple listening ports to an AS group, an instance is considered healthy only when all the ports detect the instance is healthy. If the instance is detected unhealthy by any of the ports, the instance will be removed from the AS group.
- If you add a load balancer that has multiple listening ports to an AS group, you are advised to create AS policies based on ECS metrics, rather than network metrics or application metrics. If a network metric or an application metric is used, scale-out and scale-in actions may happen at the same time.

- If you add a load balancer that has multiple listening ports to an AS group, AS can complete a scale-out or scale-in action only when the load balancer listens or no longer listens on all these ports on the instances to be added or removed. Otherwise, AS will release the instances to be added and create new ones in the scale-out action or will not release the instances to be removed in the scale-in action.

## 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. The name contains only letters, digits, underscores (_), and hyphens (-), and cannot exceed 64 characters.  |
| scaling_configuration_id | Yes       | String  | Specifies the AS configuration ID, which can be obtained using the API for querying AS configurations. For details, see <a href="#">Querying AS configurations</a> .                           |
| desired_instance_number  | No        | Integer | Specifies the expected number of instances. The default value is the minimum number of instances.<br>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 <b>0</b> .   |
| max_instance_number      | No        | Integer | Specifies the maximum number of instances. The default value is <b>1</b> . The value is an integer ranging from 0 to 300.  |

| Parameter       | Mandatory | Type                                    | Description   |
|-----------------|-----------|---|---|
| cool_down_time  | No        | Integer                                 | <p>Specifies the cooldown period (in seconds). The value ranges from <b>0</b> to <b>86400</b> and defaults to <b>300</b>.</p> <p>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.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"><li>• 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.</li><li>• 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.</li></ul> |
| lb_listener_id  | No        | String                                  | <p>Specifies the ID of a listener added to a load balancer. You can add up to six listeners. Separate listener IDs with commas (,). For how to obtain a listener ID, see <a href="#">Querying Load Balancers</a>.</p> <p>This parameter is alternative to <b>lbaas_listeners</b>.</p>   |
| lbaas_listeners | No        | Array of <b>lbaas_listeners</b> objects | <p>Specifies information about a load balancer. You can add up to six load balancers. This parameter is in list data structure. For details, see <a href="#">Table 5-3</a>. For how to obtain information about a load balancer, see <a href="#">Querying Backend Server Groups</a>.</p> <p>This parameter is alternative to <b>lb_listener_id</b>.</p>   |

| Parameter       | Mandatory | Type   | Description  |
|-----------------|-----------|--|--|
| 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. For details, see <a href="#">Regions and Endpoints</a> .   |
| networks        | Yes       | Array of <a href="#">networks</a> 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 how to obtain information about subnets, see <a href="#">Querying Subnets</a> . For the information about the data structure, see <a href="#">Table 5-4</a> .  |
| security_groups | No        | Array of <a href="#">security_groups</a> objects | Specifies the security group information. Only one security group can be selected. For how to obtain security group information, see <a href="#">Querying Security Groups</a> . For the information about the data structure, see <a href="#">Table 5-7</a> .<br><br>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 <i>Virtual Private Network API Reference</i> .  |



| Parameter                          | Mandatory | Type    | Description  |
|------------------------------------|-----------|---------|--|
| health_periodic_audit_method       | No        | String  | <p>Specifies the health check method for instances in the AS group. The health check methods include <b>ELB_AUDIT</b> and <b>NOVA_AUDIT</b>. When load balancing is configured for an AS group, the default value is <b>ELB_AUDIT</b>. Otherwise, the default value is <b>NOVA_AUDIT</b>.</p> <ul style="list-style-type: none"> <li>• <b>ELB_AUDIT</b>: indicates the ELB health check, which takes effect in an AS group with a listener.</li> <li>• <b>NOVA_AUDIT</b>: indicates the ECS instance health check, which is the health check method that comes with AS.</li> </ul> |
| health_periodic_audit_time         | No        | Integer | <p>Specifies the health check interval. The value can be <b>1</b>, <b>5</b>, <b>15</b>, <b>60</b>, or <b>180</b> in the unit of minutes. If this parameter is not specified, the default value is <b>5</b>.</p> <p>If the value is set to <b>0</b>, health check is performed every 10 seconds.</p>  |
| health_periodic_audit_grace_period | No        | Integer | <p>Specifies the grace period for instance health check. The unit is second and the value ranges from <b>0</b> to <b>86400</b>. The default value is <b>600</b>.</p> <p>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.</p> <p>This parameter is valid only when the instance health check method of the AS group is <b>ELB_AUDIT</b>.</p>   |

| Parameter                 | Mandatory | Type             | Description  |
|---------------------------|-----------|------------------|--|
| instance_terminate_policy | No        | String           | <p>Specifies the instance removal policy.</p> <ul style="list-style-type: none"><li>• <b>OLD_CONFIG_OLD_INSTANCE</b> (default): The earlier-created instances based on the earlier-created AS configurations are removed first.</li><li>• <b>OLD_CONFIG_NEW_INSTANCE</b>: The later-created instances based on the earlier-created AS configurations are removed first.</li><li>• <b>OLD_INSTANCE</b>: The earlier-created instances are removed first.</li><li>• <b>NEW_INSTANCE</b>: The later-created instances are removed first.</li></ul>      |
| notifications             | No        | Array of strings | <p>Specifies the notification mode. <b>EMAIL</b> refers to notification by email.</p> <p>This parameter has been discarded. You can configure notifications for the AS group by referring to <a href="#">Notifications</a>.</p>  |
| delete_publicip           | No        | Boolean          | <p>Specifies whether to release the EIPs bound to ECSs when the ECSs are removed from the AS group. The value can be <b>true</b> or <b>false</b>. The default value is <b>false</b>.</p> <ul style="list-style-type: none"><li>• <b>true</b>: 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.</li><li>• <b>false</b>: The EIPs bound to ECSs will be unbound but will not be released when the ECSs are removed.</li></ul> |

| Parameter             | Mandatory | Type    | Description  |
|-----------------------|-----------|---------|--|
| delete_volume         | No        | Boolean | <p>Specifies whether to delete the data disks attached to ECSs when the ECSs are removed. The value can be <b>true</b> or <b>false</b>. The default value is <b>false</b>.</p> <ul style="list-style-type: none"><li>• <b>true</b>: 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.</li><li>• <b>false</b>: The data disks attached to ECSs will be detached but will not be released when the ECSs are removed.</li></ul>  |
| enterprise_project_id | No        | String  | <p>Specifies the enterprise project ID, which is used to specify the enterprise project to which the AS group belongs.</p> <ul style="list-style-type: none"><li>• If the value is <b>0</b> or left blank, the AS group belongs to the default enterprise project.</li><li>• If the value is a UUID, the AS group belongs to the enterprise project corresponding to the UUID. For how to obtain an enterprise project ID, see <a href="#">Querying Enterprise Projects</a>.</li></ul> <p>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.</p> <p><b>NOTE</b><br/>For details about enterprise project features, see <a href="#">Enterprise Project Management Service</a>.</p> |

| Parameter                | Mandatory | Type             | Description   |
|--------------------------|-----------|------------------|---|
| 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. <ul style="list-style-type: none"> <li><b>EQUILIBRIUM_DISTRIBUTE</b> (default): When AS scales out the AS group, it preferentially distributes instances evenly across AZs in the <b>available_zones</b> list. If it fails in the target AZ, it selects another AZ based on the <b>PICK_FIRST</b> policy.</li> <li><b>PICK_FIRST</b>: When AS scales out the AS group, the target AZ is determined in the order in the <b>available_zones</b> list.</li> </ul> |
| 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. <ul style="list-style-type: none"> <li><b>iam_agency_name</b> is not transferred if it is set to <b>null</b>.</li> <li><b>iam_agency_name</b> is transferred if it is left blank or has a value.</li> </ul>   |
| tags                     | No        | Array of strings | Creates tags and adds them the AS group. Each AS group can have a maximum of 10 tags.<br>For details, see <a href="#">Table 5-8</a> .   |

**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. |

| Parameter        | Mandatory | Type    | Description  |
|------------------|-----------|---------|--|
| weight           | Yes       | Integer | Specifies the weight, which determines the percentage of requests a backend server processes. The value of this parameter ranges from <b>0</b> to <b>100</b> .   |
| protocol_version | No        | String  | <p>Specifies the version of instance IP addresses to be associated with the load balancer. The value can be <b>ipv4</b> or <b>ipv6</b>.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>If you add two or more load balancers whose <b>pool_id</b>, <b>protocol_port</b>, and <b>protocol_version</b> settings are totally same, deduplication will be performed.</li> </ul> |

**Table 5-4 networks** field description

| Parameter      | Mandatory | Type                         | Description   |
|----------------|-----------|------------------------------|---|
| id             | Yes       | String                       | Specifies the subnet ID.  |
| ipv6_enable    | No        | Boolean                      | <p>Specifies whether to support IPv6 addresses.</p> <p><b>true:</b> indicates that the NIC supports IPv6 addresses.</p> <p><b>false:</b> indicates that the NIC does not support IPv6 addresses. The default value is <b>false</b>.</p> |
| ipv6_bandwidth | No        | <b>ipv6_bandwidth</b> object | Specifies the shared bandwidth of an IPv6 address. This parameter is left blank by default, indicating that no shared IPv6 bandwidth is bound.  |

| Parameter             | Mandatory | Type   | Description  |
|-----------------------|-----------|--|--|
| allowed_address_pairs | No        | Array of <a href="#">allowed_address_pairs</a> 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 | <p>Specifies whether to allow the system to check the source and destination addresses.</p> <p>This function is enabled by default. This parameter cannot be left empty.</p> <ul style="list-style-type: none"><li>• To disable this function, set the value to <b>1.1.1.1/0</b>.</li><li>• To enable this function, set a value other than 1.1.1.1/0.</li></ul> |

**Table 5-7** security\_groups field description

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

**Table 5-8 tags** field description

| Parameter | Mandatory | Type   | Description   |
|-----------|-----------|--------|---|
| key       | Yes       | String | <p>Specifies the tag key.</p> <ul style="list-style-type: none"> <li>A key can contain up to 36 Unicode characters. It cannot be left blank.</li> <li>The tag key of a resource must be unique.</li> <li>The key of the tag can contain only uppercase letters, lowercase letters, digits, underscores (_), and hyphens (-).</li> </ul> |
| value     | No        | String | <p>Specifies the key value.</p> <ul style="list-style-type: none"> <li>A value can contain up to 43 Unicode characters and can be an empty string.</li> <li>The value can contain only uppercase letters, lowercase letters, digits, underscores (_), hyphens (-), and periods (.).</li> </ul>  |

## 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**, and the health check method of **ECS** health check, and the multi-AZ scaling policy of **PICK\_FIRST**. The enterprise project is specified by you.

```
{
  "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": ["XXa", "XXb"],
  "networks": [
    {
      "id": "3cd35bca-5a10-416f-8994-f79169559870"
    }
  ],
  "enterprise_project_id": "c92b1a5d-6f20-43f2-b1b7-7ce35e58e413",
  "multi_az_priority_policy": "PICK_FIRST",
  "iam_agency_name": "test"
}
```

## Response

**Table 5-9** 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.                             |



| 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](#).

## 5.1.2 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, enterprise project ID, 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 5-10** Parameter description

| Parameter                | Mandatory | Type   | Description   |
|--------------------------|-----------|--------|---|
| project_id               | Yes       | String | Specifies the project ID.   |
| scaling_group_name       | No        | String | Specifies the AS group name.<br>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 <a href="#">Querying AS configurations</a> . |

| Parameter             | Mandatory | Type    | Description   |
|-----------------------|-----------|---------|---|
| scaling_group_status  | No        | String  | Specifies the AS group status. The options are as follows: <ul style="list-style-type: none"><li>• <b>INSERVICE</b>: indicates that the AS group is functional.</li><li>• <b>PAUSED</b>: indicates that the AS group is paused.</li><li>• <b>ERROR</b>: indicates that the AS group malfunctions.</li><li>• <b>DELETING</b>: indicates that the AS group is being deleted.</li><li>• <b>FREEZED</b>: indicates that the AS group has been frozen.</li></ul>   |
| start_number          | No        | Integer | Specifies the start line number. The default value is <b>0</b> . The minimum value is <b>0</b> , and there is no limit on the maximum value.  |
| limit                 | No        | Integer | Specifies the number of query records. The default value is <b>20</b> . The value ranges from 0 to 100.   |
| enterprise_project_id | No        | String  | Specifies the enterprise project ID. If <b>all_granted_eps</b> is specified, AS groups in all enterprise projects you have permissions to are listed. For how to obtain an enterprise project ID, see <a href="#">Listing Enterprise Projects</a> .<br><b>NOTE</b><br>A Huawei Cloud account and its IAM users assigned with global permissions can view all the AS groups in the account.<br>If an IAM user is assigned with permissions to more 100 enterprise projects, the user can only view the AS groups in the first 100 enterprise projects. |

## 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 5-11** 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 <a href="#">scaling_groups</a> objects | Specifies the AS group list.                 |

**Table 5-12** `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.                                    |
| desired_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 <b>lbaas_listeners</b> objects | Specifies enhanced load balancers. For details, see <a href="#">Table 5-13</a> .   |
| available_zones                    | Array of strings                        | Specifies the AZ information.  |
| networks                           | Array of <b>networks</b> objects        | Specifies the network information. For details, see <a href="#">Table 5-14</a> .   |
| security_groups                    | Array of <b>security_groups</b> objects | Specifies the security group information. For details, see <a href="#">Table 5-17</a> .  |
| 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.   |
| notifications                      | Array of strings                        | Specifies the notification mode. <b>EMAIL</b> refers to notification by email. This notification mode has been canceled. You are advised to configure the notification function for the AS group. For details, see <a href="#">Notifications</a> . |
| delete_publicip                    | Boolean                                 | Specifies whether to delete the EIP bound to the ECS when deleting the ECS.  |

| Parameter                | Type             | Description  |
|--------------------------|------------------|--|
| 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.   |
| 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.   |
| tags                     | Array of strings | Specifies the tags added to the AS group. For details, see <a href="#">Table 5-18</a> .                        |

**Table 5-13 lbaas\_listeners** 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. |
| 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 5-14 networks** field description

| Parameter | Type   | Description              |
|-----------|--------|--------------------------|
| id        | String | Specifies the subnet ID. |

| Parameter             | Type                                   | Description   |
|-----------------------|--|---|
| ipv6_enable           | Boolean                                | Specifies whether to support IPv6 addresses. If this parameter is set to <b>true</b> , the NIC supports IPv6 addresses. The default value is <b>false</b> . |
| 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.  |

**Table 5-15** ipv6\_bandwidth field description

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

**Table 5-16** allowed\_address\_pairs field description

| Parameter  | Type   | Description   |
|------------|--------|---|
| ip_address | String | <p>Specifies whether to allow the system to check the source and destination addresses.</p> <p>This function is enabled by default. This parameter cannot be left empty.</p> <ul style="list-style-type: none"> <li>To disable this function, set the value to <b>1.1.1.1/0</b>.</li> <li>To enable this function, set a value other than 1.1.1.1/0.</li> </ul> |

**Table 5-17 security\_groups field description**

| Parameter | Type   | Description                      |
|-----------|--------|----------------------------------|
| id        | String | Specifies the security group ID. |

**Table 5-18 tags field description**

| Parameter | Mandatory | Type   | Description  |
|-----------|-----------|--------|--|
| key       | Yes       | String | Specifies the tag key. <ul style="list-style-type: none"> <li>A key can contain up to 36 Unicode characters. It cannot be left blank.</li> <li>The tag key of a resource must be unique.</li> <li>The key of the tag can contain only uppercase letters, lowercase letters, digits, underscores (_), and hyphens (-).</li> </ul> |
| value     | No        | String | Specifies the key value. <ul style="list-style-type: none"> <li>A value can contain up to 43 Unicode characters and can be an empty string.</li> <li>The value can contain only uppercase letters, lowercase letters, digits, underscores (_), hyphens (-), and periods (.).</li> </ul>  |

## 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",
"iam_agency_name": "test"
}
],
"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.                             |
| 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](#).

### 5.1.3 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 5-19** 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 5-20** Response parameters

| Parameter     | Type                                  | Description                           |
|---------------|---------------------------------------|---------------------------------------|
| scaling_group | <a href="#">scaling_groups</a> object | Specifies details about the AS group. |

**Table 5-21** [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.                                    |
| desired_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 (,). |
| lbaas_listeners            | Array of <a href="#">lbaas_listeners</a> objects | Specifies enhanced load balancers. For details, see <a href="#">Table 5-13</a> .              |
| available_zones            | Array of strings                                 | Specifies the AZ information.   |
| networks                   | Array of <a href="#">networks</a> objects        | Specifies the network information. For details, see <a href="#">Table 5-14</a> .              |

| Parameter                          | Type   | Description  |
|------------------------------------|--|--|
| security_groups                    | Array of <a href="#">security_groups</a> objects | Specifies the security group information. For details, see <a href="#">Table 5-17</a> .  |
| 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.   |
| notifications                      | Array of strings                                 | Specifies the notification mode. <b>EMAIL</b> refers to notification by email. This notification mode has been canceled. You are advised to configure the notification function for the AS group. For details, see <a href="#">Notifications</a> . |
| 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.   |
| activity_type                      | String   | Specifies the type of the AS action.   |

| Parameter                | Type             | Description  |
|--------------------------|------------------|--|
| 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.   |
| tags                     | Array of strings | Specifies the tags added to the AS group. For details, see <a href="#">Table 5-18</a> .                        |

**Table 5-22 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 <b>true</b> , the NIC supports IPv6 addresses. The default value is <b>false</b> . |
| ipv6_bandwidth        | <a href="#">ipv6_bandwidth</a> 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 <a href="#">allowed_address_pairs</a> objects | Specifies whether to allow the system to check the source and destination addresses.  |

**Table 5-23 ipv6\_bandwidth** field description

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

**Table 5-24** allowed\_address\_pairs field description

| Parameter  | Type   | Description   |
|------------|--------|---|
| ip_address | String | <p>Specifies whether to allow the system to check the source and destination addresses.</p> <p>This function is enabled by default. This parameter cannot be left empty.</p> <ul style="list-style-type: none"> <li>To disable this function, set the value to <b>1.1.1.1/0</b>.</li> <li>To enable this function, set a value other than 1.1.1.1/0.</li> </ul> |

## 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,
    "notifications": null,
    "enterprise_project_id": "c92b1a5d-6f20-43f2-b1b7-7ce35e58e413",
    "activity_type": "MODIFY_ELB",
    "multi_az_priority_policy": "PICK_FIRST",
  }
}
```

```
"iam_agency_name":"test"  
}  
}
```

## 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](#).

## 5.1.4 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, ELB, 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 5-25** 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 5-26** Request parameters

| Parameter               | Mandatory | Type    | Description  |
|-------------------------|-----------|---------|--|
| scaling_group_name      | No        | String  | Specifies the AS group name. The name contains only letters, digits, underscores (_), and hyphens (-), and cannot exceed 64 characters.  |
| desired_instance_number | No        | Integer | Specifies the expected number of instances.<br>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.   |

| Parameter           | Mandatory | Type                                      | Description   |
|---------------------|-----------|---|---|
| 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_time      | No        | Integer                                   | Specifies the cooldown period (in seconds). The value ranges from 0 to 86400 and is 300 by default.   |
| available_zones     | No        | Array of strings                          | <p>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.</p> <p>For details, see <a href="#">Regions and Endpoints</a>.</p> <p>You can change the AZ of an AS group only when no scaling action is being performed in the group.</p>  |
| networks            | No        | Array of <a href="#">networks</a> objects | <p>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 how to obtain information about subnets, see <a href="#">Querying Subnets</a>. For the information about the data structure, see <a href="#">Table 5-28</a>.</p> <p>The value of this parameter can be changed only when all the following conditions are met:</p> <ul style="list-style-type: none"> <li>• No scaling actions are triggered in the AS group.</li> <li>• The number of instances in the AS group is 0.</li> <li>• The AS group is not in service.</li> </ul> |



| Parameter       | Mandatory | Type   | Description  |
|-----------------|-----------|--|--|
| security_groups | No        | Array of <a href="#">security_groups</a> objects | <p>Specifies the security group information. A maximum of one security group can be selected. For how to obtain security group information, see <a href="#">Querying Security Groups</a>. For information about the data structure, see <a href="#">Table 5-31</a>.</p> <p>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:</p> <ul style="list-style-type: none"> <li>• No scaling actions are triggered in the AS group.</li> <li>• The number of instances in the AS group is 0.</li> <li>• The AS group is not in service.</li> </ul> |
| lb_listener_id  | No        | String   | <p>Specifies the ELB listener ID. You can add up to six load balancer listeners. Separate listener IDs with commas (,). For details about how to obtain the listener ID, see <a href="#">Querying Load Balancers</a>.</p> <p>The value of this parameter can be changed only when all the following conditions are met:</p> <ul style="list-style-type: none"> <li>• No scaling actions are triggered in the AS group.</li> <li>• The number of instances in the AS group is 0.</li> <li>• The AS group is not in service.</li> </ul>  |

| Parameter                    | Mandatory | Type                                    | Description   |
|------------------------------|-----------|---|---|
| lbaas_listeners              | No        | Array of <b>lbaas_listeners</b> 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 <a href="#">Table 5-27</a> . For how to obtain information about an enhanced load balancer, see <a href="#">Querying Backend Server Groups</a> .   |
| health_periodic_audit_method | No        | String                                  | Specifies the health check method for instances in the AS group. The health check methods include <b>ELB_AUDIT</b> and <b>NOVA_AUDIT</b> . When load balancing is configured for an AS group, the default value is <b>ELB_AUDIT</b> . Otherwise, the default value is <b>NOVA_AUDIT</b> . <ul style="list-style-type: none"><li>• <b>ELB_AUDIT</b>: indicates the ELB health check, which takes effect in an AS group with a listener.</li><li>• <b>NOVA_AUDIT</b>: indicates the ECS health check, which is the health check method delivered with AS.</li></ul> |
| health_periodic_audit_time   | No        | Integer                                 | Specifies the health check period for the instances in the AS group. The value can be <b>1</b> , <b>5</b> , <b>15</b> , <b>60</b> , or <b>180</b> in the unit of minutes.<br>If the value is set to <b>0</b> , health check is performed every 10 seconds.  |

| Parameter                          | Mandatory | Type             | Description  |
|------------------------------------|-----------|------------------|--|
| instance_terminate_policy          | No        | String           | <p>Specifies the instance removal policy.</p> <ul style="list-style-type: none"> <li>• <b>OLD_CONFIG_OLD_INSTANCE</b> (default): The earlier-created instances based on the earlier-created AS configurations are removed first.</li> <li>• <b>OLD_CONFIG_NEW_INSTANCE</b>: The later-created instances based on the earlier-created AS configurations are removed first.</li> <li>• <b>OLD_INSTANCE</b>: The earlier-created instances are removed first.</li> <li>• <b>NEW_INSTANCE</b>: The later-created instances are removed first.</li> </ul> |
| health_periodic_audit_grace_period | No        | Integer          | <p>Specifies the grace period for instance health check. The unit is second and value range is 0-86400. The default value is <b>600</b>. 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.</p> <p>This parameter is valid only when the instance health check method of the AS group is <b>ELB_AUDIT</b>.</p>  |
| scaling_configuration_id           | No        | String           | <p>Specifies the AS configuration ID, which can be obtained using the API for querying AS configurations. For details, see <a href="#">Querying AS configurations</a>.</p>   |
| notifications                      | No        | Array of strings | <p>Specifies the notification mode. <b>EMAIL</b> refers to notification by email.</p> <p>This notification mode has been canceled. You are advised to configure the notification function for the AS group. For details, see <a href="#">Notifications</a>.</p>  |

| Parameter       | Mandatory | Type    | Description   |
|-----------------|-----------|---------|---|
| delete_publicip | No        | Boolean | <p>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 <b>false</b>. Then, the system only unbinds the EIP from the ECS and reserves the EIP.</p> <ul style="list-style-type: none"><li>• <b>true</b>: deletes 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.</li><li>• <b>false</b>: only unbinds the EIP bound to the ECS when deleting the ECS.</li></ul> |
| delete_volume   | No        | Boolean | <p>Specifies whether to delete the data disks attached to the ECS when deleting the ECS. The value can be <b>true</b> or <b>false</b>. The default value is <b>false</b>.</p> <ul style="list-style-type: none"><li>• <b>true</b>: deletes 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.</li><li>• <b>false</b>: only detaches the data disks attached to the ECS when deleting the ECS.</li></ul>                             |

| Parameter                | Mandatory | Type   | Description   |
|--------------------------|-----------|--------|---|
| enterprise_project_id    | No        | String | <p>Specifies the enterprise project ID, which is used to specify the enterprise project to which the AS group belongs.</p> <ul style="list-style-type: none"><li>• If the value is <b>0</b> or left blank, the AS group belongs to the default enterprise project.</li><li>• If the value is a UUID, the AS group belongs to the enterprise project corresponding to the UUID.. For how to obtain an enterprise project ID, see <a href="#">Querying Enterprise Projects</a>.</li></ul> <p>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.</p> <p><b>NOTE</b><br/>For details about enterprise project features, see <a href="#">Enterprise Project Management Service</a>.</p> |
| multi_az_priority_policy | No        | String | <p>Specifies the priority policy used to select target AZs when adjusting the number of instances in an AS group.</p> <ul style="list-style-type: none"><li>• <b>EQUILIBRIUM_DISTRIBUTE</b> (default): When adjusting the number of instances, ensure that instances in each AZ in the <b>available_zones</b> list is evenly distributed. If instances cannot be added in the target AZ, select another AZ based on the <b>PICK_FIRST</b> policy.</li><li>• <b>PICK_FIRST</b>: When adjusting the number of instances, target AZs are determined in the order in the <b>available_zones</b> list.</li></ul>   |
| description              | No        | String | <p>Specifies the description of the AS group. The value can contain 1 to 256 characters.</p>  |

| Parameter       | Mandatory | Type   | Description  |
|-----------------|-----------|--------|--|
| iam_agency_name | No        | String | Specifies the agency name, in 1 to 64 characters. <ul style="list-style-type: none"><li>• If <b>iam_agency_name</b> is set to null, you do not need to modify it.</li><li>• If <b>iam_agency_name</b> is left blank or has a value, you need to modify it.</li></ul> |

Table 5-27 lbaas\_listeners field description

| Parameter     | Mandatory | Type    | Description   |
|---------------|-----------|---------|---|
| pool_id       | Yes       | String  | Specifies the backend ECS group ID.<br>The value of this parameter can be changed only when all the following conditions are met: <ul style="list-style-type: none"><li>• No scaling actions are triggered in the AS group.</li><li>• The number of instances in the AS group is 0.</li><li>• The AS group is not in service.</li></ul> |
| 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 | <p>Specifies which version of IP addresses of backend servers will be bound with the load balancer. The value can be IPv4 or IPv6.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>If you add two or more load balancers whose <b>pool_id</b>, <b>protocol_port</b>, and <b>protocol_version</b> settings are totally same, deduplication will be performed.</li> </ul> |

**Table 5-28 networks** field description

| Parameter             | Mandatory | Type  | Description   |
|-----------------------|-----------|---|---|
| id                    | Yes       | String  | Specifies the subnet ID.  |
| ipv6_enable           | No        | Boolean                                       | <p>Specifies whether to support IPv6 addresses.</p> <p><b>true:</b> indicates that the NIC supports IPv6 addresses.</p> <p><b>false:</b> indicates that the NIC does not support IPv6 addresses. The default value is <b>false</b>.</p> |
| ipv6_bandwidth        | No        | <b>ipv6_bandwidth</b> 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 <b>allowed_address_pairs</b> objects | Specifies whether to allow the system to check the source and destination addresses.  |

**Table 5-29 ipv6\_bandwidth** field description

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

**Table 5-30 allowed\_address\_pairs** field description

| Parameter  | Type   | Description  |
|------------|--------|--|
| ip_address | String | <p>Specifies whether to allow the system to check the source and destination addresses.</p> <p>This function is enabled by default. This parameter cannot be left empty.</p> <ul style="list-style-type: none"><li>• To disable this function, set the value to <b>1.1.1.1/0</b>.</li><li>• To enable this function, set a value other than 1.1.1.1/0.</li></ul> |

**Table 5-31 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, enterprise project, 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](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",
  "enterprise_project_id": "c92b1a5d-6f20-43f2-b1b7-7ce35e58e413",
  "desired_instance_number": 1,
  "min_instance_number": 1,
  "max_instance_number": 3,
  "cool_down_time": 200,
  "multi_az_priority_policy": "PICK_FIRST",
  "iam_agency_name": "test"
}
```



## Response parameters

**Table 5-32** 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.                             |

| 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](#).

## 5.1.5 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.



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 5-33** Parameter description

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

| Parameter    | Mandatory | Type   | Description   |
|--------------|-----------|--------|---|
| force_delete | No        | String | Specifies whether to forcibly delete an AS group. Options: <ul style="list-style-type: none"> <li><b>no</b> (default): indicates that the AS group is not forcibly deleted.</li> <li><b>yes</b>: indicates to forcibly delete an AS group.</li> </ul> |

## 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.        |

| 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](#).

## 5.1.6 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 5-34** 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. |

## Request

**Table 5-35** Request parameters

| Parameter | Mandatory | Type   | Description  |
|-----------|-----------|--------|--|
| action    | Yes       | String | Specifies a flag for enabling or disabling an AS group. <ul style="list-style-type: none"> <li><b>resume</b>: enables the AS group.</li> <li><b>pause</b>: disables the AS group.</li> </ul> |

## 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.                             |
| 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 5-36** Parameter description

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

## Request

**Table 5-37** 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. |
| instance_config            | No        | Object | Specifies the ECS configuration. For details, see <a href="#">Table 5-38</a> .  |

| Parameter                       | Mandatory | Type   | Description  |
|---------------------------------|-----------|--------|--|
| source_scaling_configuration_id | No        | String | <p>Specifies the ID of the source AS configuration, which will be used together with <b>instance_config</b> to create a new AS configuration.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"><li>• If <b>instance_id</b> is specified in <b>instance_config</b>, <b>instance_id</b> is preferentially used to create the new AS configuration, and <b>source_scaling_configuration_id</b> does not take effect.</li><li>• If <b>instance_id</b> is not specified in <b>instance_config</b>, <b>source_scaling_configuration_id</b> and <b>instance_config</b> are used together to create the new AS configuration.</li><li>• If a parameter in <b>instance_config</b> is set to <b>null</b>, the corresponding setting of the source AS configuration takes effect.</li><li>• If a parameter in <b>instance_config</b> is not set to <b>null</b> or left empty, this parameter overwrites the corresponding setting of the source AS configuration.</li><li>• If <b>source_scaling_configuration_id</b> is not specified, <b>scaling_configuration_name</b> and <b>instance_config</b> are mandatory.</li></ul> |



**Table 5-38 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 <b>flavorRef</b> , <b>imageRef</b> , <b>disk</b> , <b>tenancy</b> , <b>dedicated_host_id</b> , and <b>security_groups</b> fields do not take effect.<br><br>If the <b>instance_id</b> field is not specified, <b>flavorRef</b> , <b>imageRef</b> , and <b>disk</b> 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. For details, see <a href="#">Querying Details About Flavors and Extended Flavor Information</a> .   |
| imageRef    | No        | String                       | Specifies the image ID. Its value is the same as that of <b>image_id</b> for specifying the image selected during ECS creation. You can obtain an image ID by calling the IMS API for querying images. For details, see <a href="#">Querying Images</a> .   |
| disk        | No        | Array of <b>disk</b> objects | Specifies the disk group information. System disks are mandatory and data disks are optional. For details, see <a href="#">Table 5-39</a> .   |
| key_name    | No        | String                       | Specifies the name of the SSH key pair used to log in to the ECS.<br><br>For details about how to obtain a key pair, see <a href="#">Creating and Importing an SSH Key Pair</a> .<br><br><b>NOTE</b><br>If both <b>key_name</b> and <b>user_data</b> are specified, <b>user_data</b> only injects user data.  |

| Parameter   | Mandatory | Type                                | Description   |
|-------------|-----------|-------------------------------------|---|
| personality | No        | Array of <b>personality</b> 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 <a href="#">Table 5-41</a> .  |
| public_ip   | No        | <b>public_ip</b> object             | <p>Specifies the EIP of the ECS. The EIP can be configured in two ways. For details, see <a href="#">Table 5-42</a>.</p> <ul style="list-style-type: none"> <li>Do not use an EIP. In this case, this parameter is unavailable.</li> <li>Automatically assign an EIP. You need to specify the information about the new EIP.</li> </ul> <p><b>NOTE</b><br/>If you enable fine-grained policy and associate the AS configuration with an EIP specified to an AS group, the fine-grained policy granted to you must contain the authorization item that allows the <b>vpc:publiclips:create</b> action.</p> |

| Parameter | Mandatory | Type   | Description   |
|-----------|-----------|--------|---|
| user_data | No        | String | <p>Specifies the user data to be injected during the ECS creation process. Text, text files, and gzip files can be injected. For more information, see <a href="#">Passing User Data to ECSs</a>.</p> <p>Constraints:</p> <ul style="list-style-type: none"> <li>The content to be injected must be encoded with base64. The maximum size of the content to be injected (before encoding) is 32 KB.</li> <li>If <b>key_name</b> is not specified, the data injected by <b>user_data</b> is the password of user <b>root</b> for logging in to the ECS by default.</li> <li>This parameter is mandatory when you create a Linux ECS using the password authentication mode. Its value is the initial user <b>root</b> password.</li> </ul> <p>Password complexity requirements:</p> <ul style="list-style-type: none"> <li>Consists of 8 to 26 characters.</li> <li>Contains at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters <code>!@#\$%^&amp;_+=+[{ }];,./?</code></li> </ul> <p>Examples:</p> <ul style="list-style-type: none"> <li>Use a plaintext password (risky in security), for example, <b>Cloud.1234</b>.<br/> <pre>#!/bin/bash echo 'root:Cloud.1234'   chpasswd ;</pre> </li> <li>Use a ciphertext password (recommended)<br/> <pre>#!/bin/bash echo 'root:\$6\$V6azyeLwcD3CHlpY \$BN3VVq18fmCkj66B4zdHLWevqcxlq'   chpasswd -e</pre> </li> </ul> <p>In the preceding command output, <b>\$6\$V6azyeLwcD3CHlpY \$BN3VVq18fmCkj66B4zdHLWevqcxlq</b> is the ciphertext</p> |

| Parameter | Mandatory | Type                   | Description   |
|-----------|-----------|------------------------|---|
|           |           |                        | <p>password, which can be generated as follows:</p> <ol style="list-style-type: none"> <li>1. Generate an encrypted salt value.<br/> <pre>[root@test linux]# python -c "import crypt, getpass, pwd;print crypt.mksalt('\$6\$V6azyeLwcD3CHlpY</pre> </li> <li>2. Generate a ciphertext password based on the salt value.<br/> <pre>[root@test linux]# python -c "import crypt, getpass, pwd;print crypt.crypt('Cloud.1234', '\$6\$V6azyeLwcD3CHlpY')"</pre> <pre>\$6\$V6azyeLwcD3CHlpY\$BN3VVq18fmCkj66B4zdHLWevqcxlig</pre> </li> </ol> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Linux<br/> <pre>#!/bin/bash</pre> <pre>echo user_test &gt;&gt; /home/user.txt</pre> </li> <li>• Windows<br/> <pre>rem cmd</pre> <pre>echo 111 &gt; c:\aaa.txt</pre> </li> </ul> <p><b>NOTE</b><br/>Data injection is not supported for ECSs that use a Linux image and the password login mode.</p> |
| metadata  | No        | <b>metadata</b> object | <p>Specifies the ECS metadata. For details, see <a href="#">Table 5-45</a>.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• This parameter is mandatory when a Windows ECS with password authentication is created.</li> <li>• This field does not allow users to write data. It is mandatory when the ECS is to be created using a Windows image.</li> </ul>   |

| Parameter         | Mandatory | Type   | Description   |
|-------------------|-----------|--|---|
| security_group_s  | No        | Array of <a href="#">security_groups</a> objects | <p>Specifies security groups. For details, see <a href="#">Table 5-46</a>. For how to obtain information about security groups using VPC IDs, see <a href="#">Querying Security Groups</a> in <i>Virtual Private Cloud API Reference</i>.</p> <p>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.</p> |
| server_group_id   | No        | String   | Specifies the ECS group ID. For how to obtain an ECS group ID, see <a href="#">Querying ECS Groups</a> .  |
| tenancy           | No        | String   | Specifies that ECSs are created on DeHs. Options: <ul style="list-style-type: none"><li>• <b>dedicated</b>: Specifies that ECSs are created on DeHs.</li><li>• This parameter is not specified.</li></ul>   |
| dedicated_host_id | No        | String   | Specifies the ID of a DeH.<br><b>NOTE</b> <ul style="list-style-type: none"><li>• This parameter is valid only when <b>tenancy</b> is set to <b>dedicated</b>.</li><li>• If this parameter is specified, ECSs will be created on a specified DeH.</li><li>• 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.</li></ul>   |

| Parameter                    | Mandatory | Type   | Description   |
|------------------------------|-----------|--------|---|
| multi_flavor_priority_policy | No        | String | Specifies the priority policy used when there are multiple flavors and instances to be created using an AS configuration. <ul style="list-style-type: none"> <li>● <b>PICK_FIRST</b> (default): When an ECS is added for capacity expansion, the target flavor is determined in the order in the <b>flavorRef</b> list.</li> <li>● <b>COST_FIRST</b>: When an ECS is added for capacity expansion, the target flavor is determined for minimal expenses.</li> </ul> |
| market_type                  | No        | String | Specifies a billing mode for an ECS. The options are as follows: <ul style="list-style-type: none"> <li>● <b>Pay-per-use</b>, which is not specified</li> <li>● <b>Spot pricing</b></li> </ul>  |

 **NOTE**

For a Linux ECS, its password can be injected only using **userdata**. For a Windows ECS, its password can be injected only using metadata **admin\_pass**.

**Table 5-39 disk** field description

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

| Parameter            | Mandatory | Type   | Description  |
|----------------------|-----------|--------|--|
| volume_type          | Yes       | String | <p>Specifies the ECS system disk type. The disk type must match the available disk type.</p> <p>The value can be <b>SATA</b>, <b>SAS</b>, <b>GPSSD</b>, <b>SSD</b>, <b>GPSSD2</b>, <b>ESSD2</b>, and <b>ESSD</b>.</p> <ul style="list-style-type: none"> <li>• <b>SSD</b>: the ultra-high I/O type</li> <li>• <b>SAS</b>: the high I/O type</li> <li>• <b>SATA</b>: the common I/O type</li> <li>• <b>GPSSD</b>: the general purpose SSD type</li> <li>• <b>ESSD</b>: the extreme SSD type</li> <li>• <b>GPSSD2</b>: the general purpose SSD V2 type</li> <li>• <b>ESSD2</b>: the extreme SSD V2 type</li> </ul> <p>If the specified disk type is not available in the AZ, the disk will fail to create.</p> <p><b>NOTE</b><br/>Different ECS flavors support different disk types. The supported disk types will be displayed on the management console.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• For details about disk types, see <a href="#">Disk Types and Performance</a>.</li> </ul> |
| disk_type            | Yes       | String | <p>Specifies a disk type. The options are as follows:</p> <ul style="list-style-type: none"> <li>• <b>DATA</b>: indicates a data disk.</li> <li>• <b>SYS</b>: indicates a system disk.</li> </ul> <p><b>NOTE</b><br/>System disk encryption is not supported.</p>  |
| dedicated_storage_id | No        | String | <p>Specifies a DSS device ID for creating an ECS disk.</p> <p><b>NOTE</b><br/>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 <b>volume_type</b> value.</p>   |

| Parameter          | Mandatory | Type                            | Description   |
|--------------------|-----------|---------------------------------|---|
| 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.<br><br><b>NOTE</b><br>You can obtain the disk backup snapshot ID using the full-ECS backup ID in <a href="#">Querying a Single Backup</a> . Each disk in an AS configuration must correspond to a disk backup in the full-ECS backup by <b>snapshot_id</b> .  |
| metadata           | No        | <a href="#">metadata</a> object | Specifies the metadata for creating disks. For details, see <a href="#">Table 5-40</a> .  |
| iops               | No        | Integer                         | Specifies the IOPS configured for an EVS disk. This parameter is mandatory only when <b>volume_type</b> is set to <b>GPSSD2</b> or <b>ESSD2</b> .<br><br><b>NOTE</b> <ul style="list-style-type: none"> <li>For details about IOPS of GPSSD2 and ESSD2 EVS disks, see <a href="#">Disk Types and Performance</a>.</li> <li>Only pay-per-use billing is supported currently.</li> </ul>  |
| throughput         | No        | Integer                         | Specifies the throughput of an EVS disk. The unit is MiB/s. This parameter is mandatory when <b>volume_type</b> is set to <b>GPSSD2</b> and cannot be configured when <b>volume_type</b> is set to other values.<br><br><b>NOTE</b> <ul style="list-style-type: none"> <li>For details about the throughput range of GPSSD2 EVS disks, see <a href="#">Disk Types and Performance</a>.</li> <li>Only pay-per-use billing is supported currently.</li> </ul> |



**Table 5-40 metadata** Field Description for Creating Disks

| Parameter                        | Mandatory | Type   | Description   |
|----------------------------------|-----------|--------|---|
| <code>__system__encrypted</code> | No        | String | <p>Specifies encryption in <b>metadata</b>. The value can be <b>0</b> (encryption disabled) or <b>1</b> (encryption enabled).</p> <p>If this parameter does not exist, the disk will not be encrypted by default.</p> <p><b>NOTE</b><br/>System disk encryption is not supported.</p>   |
| <code>__system__cmkid</code>     | No        | String | <p>Specifies the CMK ID, which indicates encryption in <b>metadata</b>. This parameter is used with <code>__system__encrypted</code>.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>System disk encryption is not supported.</li> <li>For details about how to obtain the CMK ID, see <a href="#">Querying the List of CMKs</a>.</li> </ul> |

**Table 5-41 personality** field description

| Parameter            | Mandatory | Type   | Description  |
|----------------------|-----------|--------|--|
| <code>path</code>    | Yes       | String | <p>Specifies the path of the injected file.</p> <ul style="list-style-type: none"> <li>For Linux OSs, specify the path, for example, <code>/etc/foo.txt</code>, for storing the injected file.</li> <li>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, <code>foo</code>. The file name contains only letters and digits.</li> </ul> |
| <code>content</code> | Yes       | String | <p>Specifies the content of the injected file.</p> <p>The value must be the information after the content of the injected file is encoded using Base64.</p>  |

**Table 5-42 public\_ip** field description

| Parameter | Mandatory | Type              | Description  |
|-----------|-----------|-------------------|--|
| eip       | Yes       | <b>eip</b> object | Specifies the EIP automatically assigned to the ECS. For details, see <a href="#">Table 5-43</a> . |

**Table 5-43 eip** field description

| Parameter | Mandatory | Type                    | Description  |
|-----------|-----------|-------------------------|--|
| ip_type   | Yes       | String                  | Specifies the EIP type.<br>Enumerated values of the IP address type: <ul style="list-style-type: none"><li>• <b>5_bgp</b>: indicates the dynamic BGP.</li><li>• <b>5_sbgp</b>: indicates the static BGP.</li></ul> For details, see the <b>Public IP</b> field in <a href="#">Assigning an EIP</a> in <i>Virtual Private Cloud API Reference</i> . |
| bandwidth | Yes       | <b>bandwidth</b> object | Specifies the bandwidth of an IP address. For details, see <a href="#">Table 5-44</a> .  |

Table 5-44 bandwidth field description

| Parameter  | Mandatory | Type    | Description  |
|------------|-----------|---------|--|
| size       | No        | Integer | <p>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.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"><li>• If <b>share_type</b> is set to <b>PER</b>, this parameter is mandatory. If <b>share_type</b> is set to <b>WHOLE</b>, this parameter is invalid.</li><li>• 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.</li><li>• The minimum unit for bandwidth varies depending on the bandwidth range.<ul style="list-style-type: none"><li>• The minimum unit is 1 Mbit/s if the allowed bandwidth size ranges from 0 to 300 Mbit/s (with 300 Mbit/s included).</li><li>• The minimum unit is 50 Mbit/s if the allowed bandwidth size ranges 300 Mbit/s to 1000 Mbit/s (with 1000 Mbit/s included).</li><li>• The minimum unit is 500 Mbit/s if the allowed bandwidth size is greater than 1000 Mbit/s.</li></ul></li></ul> |
| share_type | Yes       | String  | <p>Specifies the bandwidth sharing type.</p> <p>Enumerated values of the sharing type:</p> <ul style="list-style-type: none"><li>• <b>PER</b>: dedicated</li><li>• <b>WHOLE</b>: shared</li></ul>  |

| Parameter     | Mandatory | Type   | Description   |
|---------------|-----------|--------|---|
| charging_mode | No        | String | <p>Specifies the bandwidth billing mode.</p> <p>The options are as follows:</p> <ul style="list-style-type: none"><li>• <b>bandwidth</b>: billed by bandwidth.</li><li>• <b>traffic</b>: billed by traffic.</li></ul> <p>If the parameter value is out of the preceding options, creating the ECS will fail.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"><li>• If <b>share_type</b> is set to <b>PER</b>, this parameter is mandatory.</li><li>• If <b>share_type</b> is set to <b>WHOLE</b>, this parameter is invalid.</li></ul> |
| id            | No        | String | <p>Specifies the bandwidth ID. When using a shared bandwidth, you can select an existing shared bandwidth to create an EIP. For details, see <a href="#">Querying Bandwidths</a>.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"><li>• If <b>share_type</b> is set to <b>PER</b>, this parameter is invalid.</li><li>• If <b>share_type</b> is set to <b>WHOLE</b>, this parameter is mandatory.</li></ul>  |

**Table 5-45 metadata** field description

| Parameter  | Mandatory | Type   | Description   |
|------------|-----------|--------|---|
| admin_pass | No        | String | <p>Specifies the initial login password of the administrator account for logging in to an ECS using password authentication. The Linux administrator is <b>root</b>, and the Windows administrator is <b>Administrator</b>.</p> <p>Password complexity requirements:</p> <ul style="list-style-type: none"> <li>• Consists of 8 to 26 characters.</li> <li>• Contains at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters <code>!@\$%^&amp;_+=+[{]}:;./?</code></li> <li>• The password cannot contain the username or the username in reversed order.</li> <li>• The Windows ECS password cannot contain the username, the username in reversed order, or more than two consecutive characters in the username.</li> </ul> |

**Table 5-46 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-tlzp",
  "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 5-47** 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 5-48** Parameter description

| Parameter                  | Mandatory | Type   | Description  |
|----------------------------|-----------|--------|--|
| project_id                 | Yes       | String | Specifies the project ID.                                      |
| scaling_configuration_name | No        | String | Specifies the AS configuration name.<br>Supports fuzzy search. |
| image_id                   | No        | String | Specifies the image ID. It is same as <b>imageRef</b> .        |

| Parameter    | Mandatory | Type    | Description  |
|--------------|-----------|---------|--|
| start_number | No        | Integer | Specifies the start line number. The default value is <b>0</b> . The minimum parameter value is <b>0</b> . |
| limit        | No        | Integer | Specifies the number of query records. The default value is <b>20</b> . 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 5-49** 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_configurations | Array of <a href="#">scaling configurations</a> objects | Specifies the AS configuration list.         |

**Table 5-50** `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  | <a href="#">instance_config</a> 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 5-51** instance\_config field description

| Parameter       | Type   | Description   |
|-----------------|--|---|
| flavorRef       | String                                       | Specifies the ECS flavor ID.  |
| imageRef        | String                                       | Specifies the image ID. It is same as <b>image_id</b> .   |
| disk            | Array of <a href="#">disk</a> 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.<br><b>NOTE</b><br>When you call APIs to query the details about an AS configuration created from an ECS or to list such AS configurations, <b>instance_name</b> is empty in the response. |
| instance_id     | String                                       | This parameter is reserved.   |
| adminPass       | String                                       | This parameter is reserved.   |
| personality     | Array of <a href="#">personality</a> objects | Specifies information about the injected file.  |
| public_ip       | <a href="#">public_ip</a> object             | Specifies the EIP of the ECS.   |
| user_data       | String                                       | Specifies the Cloud-Init user data, which is encoded using Base64.  |
| metadata        | <a href="#">metadata</a> object              | Specifies the ECS metadata. For details, see <a href="#">Table 5-58</a> .   |

| Parameter                    | Type  | Description   |
|------------------------------|---|---|
| security_group_s             | Array of <a href="#">security_group</a> s 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 5-52** 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. <b>DATA</b> indicates a data disk. <b>SYS</b> 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             | <a href="#">metadatas</a> object | Specifies the metadata for creating disks. For details, see <a href="#">Table 5-53</a> .  |
| iops                 | Integer                          | Specifies the IOPS of an EVS disk. This parameter is available when <b>volume_type</b> is set to <b>GPSSD2</b> or <b>ESSD2</b> .<br><b>NOTE</b> <ul style="list-style-type: none"> <li>For details about IOPS of GPSSD2 and ESSD2 EVS disks, see <a href="#">Disk Types and Performance</a>.</li> <li>Only pay-per-use billing is supported currently.</li> </ul> |

| Parameter  | Type    | Description  |
|------------|---------|--|
| throughput | Integer | Specifies the throughput of an EVS disk. The unit is MiB/s. This parameter is available when <b>volume_type</b> is set to <b>GPSSD2</b> .<br><b>NOTE</b> <ul style="list-style-type: none"> <li>For details about the throughput range of GPSSD2 EVS disks, see <a href="#">Disk Types and Performance</a>.</li> <li>Only pay-per-use billing is supported currently.</li> </ul> |

**Table 5-53 metadata** Field Description for Creating Disks

| Parameter           | Type   | Description  |
|---------------------|--------|--|
| __system__encrypted | String | Specifies encryption in <b>metadata</b> . The value can be <b>0</b> (encryption disabled) or <b>1</b> (encryption enabled).<br>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 <b>metadata</b> . This parameter is used with <b>__system__encrypted</b> .<br><b>NOTE</b><br>For details about how to obtain the CMK ID, see <a href="#">Querying the List of CMKs</a> . |

**Table 5-54 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 5-55 public\_ip** field description

| Parameter | Type                       | Description                               |
|-----------|----------------------------|---|
| eip       | <a href="#">eip</a> object | Specifies the automatically assigned EIP. |

**Table 5-56 eip** field description

| Parameter | Type                    | Description                               |
|-----------|-------------------------|---|
| ip_type   | String                  | Specifies the IP address type.            |
| bandwidth | <b>bandwidth</b> object | Specifies the bandwidth of an IP address. |

**Table 5-57 bandwidth** field description

| Parameter     | Type    | Description   |
|---------------|---------|---|
| size          | Integer | Specifies the bandwidth (Mbit/s).   |
| share_type    | String  | Specifies the bandwidth sharing type.<br>Enumerated values of the sharing type: <ul style="list-style-type: none"> <li>● <b>PER</b>: dedicated</li> <li>● <b>WHOLE</b>: shared</li> </ul> |
| charging_mode | String  | Specifies the bandwidth billing mode. <ul style="list-style-type: none"> <li>● <b>bandwidth</b>: billed by bandwidth.</li> <li>● <b>traffic</b>: billed by traffic.</li> </ul>            |
| 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 <b>WHOLE</b> .  |

**Table 5-58 metadata** field description

| Parameter  | Type   | Description   |
|------------|--------|---|
| admin_pass | String | Specifies the password of the <b>Administrator</b> account for a Windows ECS. |

**Table 5-59 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",
      "cluster_type": "DSS",
      "hw:passthrough": true,
      "multiattach": false
    },
    {
      "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:qlvdUkYgSjKUxcr2uJgJRMCKMLkJO5BPLooBcgsF8k",
  "public_ip": null,
  "user_data": null,
  "metadata": {},
  "security_groups": [{
    "id": "6c22a6c0-b5d2-4a84-ac56-51090dcc33be"
  }],
  "support_auto_recovery": null,
  "disk_prior": null,
  "cpu_options": null,
  "is_auto_rename": false,
  "instance_metadata": null
},
"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:qlvdUkYgSjKUxcr2uJgJRMCKMLkJO5BPLooBcgsF8k",
    "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 5-60** 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 <a href="#">Querying an AS Configuration</a> . |

### 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 5-61** Response parameters

| Parameter             | Type   | Description                        |
|-----------------------|--|------------------------------------|
| scaling_configuration | <a href="#">scaling_configuration</a> object | Provides AS configuration details. |

**Table 5-62 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.                               |
| instance_config            | <b>instance_config</b> 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 5-63 instance\_config** field description

| Parameter       | Type                                | Description   |
|-----------------|-------------------------------------|---|
| flavorRef       | String                              | Specifies the ECS flavor ID.  |
| imageRef        | String                              | Specifies the image ID. It is same as <b>image_id</b> .   |
| disk            | Array of <b>disk</b> 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.<br><b>NOTE</b><br>When you call APIs to query the details about an AS configuration created from an ECS or to list such AS configurations, <b>instance_name</b> is empty in the response. |
| instance_id     | String                              | This parameter is reserved.   |
| adminPass       | String                              | This parameter is reserved.   |
| personality     | Array of <b>personality</b> objects | Specifies information about the injected file.  |



| Parameter                    | Type   | Description   |
|------------------------------|--|---|
| public_ip                    | <a href="#">public_ip</a> object                 | Specifies the EIP of the ECS.   |
| user_data                    | String   | Specifies the Cloud-Init user data, which is encoded using Base64.  |
| metadata                     | <a href="#">metadata</a> object                  | Specifies the ECS metadata. For details, see <a href="#">Table 5-58</a> .   |
| security_groups              | Array of <a href="#">security_groups</a> 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 5-64 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. <b>DATA</b> indicates a data disk. <b>SYS</b> 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             | <a href="#">metadata</a> object | Specifies the metadata for creating disks. For details, see <a href="#">Table 5-53</a> .   |

| Parameter  | Type    | Description  |
|------------|---------|--|
| iops       | Integer | Specifies the IOPS of an EVS disk. This parameter is available when <b>volume_type</b> is set to <b>GPSSD2</b> or <b>ESSD2</b> .<br><b>NOTE</b> <ul style="list-style-type: none"> <li>For details about IOPS of GPSSD2 and ESSD2 EVS disks, see <a href="#">Disk Types and Performance</a>.</li> <li>Only pay-per-use billing is supported currently.</li> </ul>                |
| throughput | Integer | Specifies the throughput of an EVS disk. The unit is MiB/s. This parameter is available when <b>volume_type</b> is set to <b>GPSSD2</b> .<br><b>NOTE</b> <ul style="list-style-type: none"> <li>For details about the throughput range of GPSSD2 EVS disks, see <a href="#">Disk Types and Performance</a>.</li> <li>Only pay-per-use billing is supported currently.</li> </ul> |

**Table 5-65** 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 5-66** public\_ip field description

| Parameter | Type                       | Description                               |
|-----------|----------------------------|---|
| eip       | <a href="#">eip</a> object | Specifies the automatically assigned EIP. |

**Table 5-67** eip field description

| Parameter | Type                             | Description                               |
|-----------|----------------------------------|---|
| ip_type   | String                           | Specifies the IP address type.            |
| bandwidth | <a href="#">bandwidth</a> object | Specifies the bandwidth of an IP address. |

**Table 5-68 bandwidth** field description

| Parameter     | Type    | Description   |
|---------------|---------|---|
| size          | Integer | Specifies the bandwidth (Mbit/s).   |
| share_type    | String  | Specifies the bandwidth sharing type.<br>Enumerated values of the sharing type: <ul style="list-style-type: none"> <li>● <b>PER</b>: dedicated</li> <li>● <b>WHOLE</b>: shared</li> </ul> |
| charging_mode | String  | Specifies the bandwidth billing mode. <ul style="list-style-type: none"> <li>● <b>bandwidth</b>: billed by bandwidth.</li> <li>● <b>traffic</b>: billed by traffic.</li> </ul>            |
| 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 <b>WHOLE</b> .  |

**Table 5-69 metadata** field description

| Parameter  | Type   | Description   |
|------------|--------|---|
| admin_pass | String | Specifies the password of the <b>Administrator</b> account for a Windows ECS. |

**Table 5-70 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. |

| Returned Value          | 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](#).

### 5.2.4 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 5-71** 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 <a href="#">Querying AS configurations</a> . |

#### 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 5-72** Parameter description

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

### Request

**Table 5-73** Request parameters

| Parameter                | Mandatory | Type             | Description  |
|--------------------------|-----------|------------------|--|
| scaling_configuration_id | Yes       | Array of strings | Specifies the AS configuration ID. For details, see <a href="#">Querying AS configurations</a> . |

### 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.  |
| 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 5-74** Parameter description

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

| Parameter                 | Mandatory | Type    | Description  |
|---------------------------|-----------|---------|--|
| life_cycle_state          | No        | String  | Specifies the instance lifecycle status in the AS group. <ul style="list-style-type: none"><li>• <b>INSERVICE</b>: The instance is enabled.</li><li>• <b>PENDING</b>: The instance is being added to the AS group.</li><li>• <b>PENDING_WAIT</b>: The instance is waiting to be added to the AS group.</li><li>• <b>REMOVING</b>: The instance is being removed from the AS group.</li><li>• <b>REMOVING_WAIT</b>: The instance is waiting to be removed from the AS group.</li><li>• <b>STANDBY</b>: The instance is in standby state.</li><li>• <b>ENTERING_STANDBY</b>: The instance is entering the standby state.</li></ul> |
| health_status             | No        | String  | Specifies the instance health status. <ul style="list-style-type: none"><li>• <b>INITIALIZING</b>: The instance is initializing.</li><li>• <b>NORMAL</b>: The instance is normal.</li><li>• <b>ERROR</b>: The instance is abnormal.</li></ul>  |
| protect_from_scaling_down | No        | String  | Specifies the instance protection status. <ul style="list-style-type: none"><li>• <b>true</b>: Instance protection is enabled.</li><li>• <b>false</b>: Instance protection is disabled.</li></ul>  |
| start_number              | No        | Integer | Specifies the start line number. The default value is <b>0</b> . The minimum parameter value is <b>0</b> .   |

| Parameter | Mandatory | Type    | Description   |
|-----------|-----------|---------|---|
| limit     | No        | Integer | Specifies the number of query records. The default value is <b>20</b> . 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 5-75 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_group_instances | Array of scaling_group_instances objects | Specifies details about the instances in the AS group.   |

**Table 5-76 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.<br>Supports fuzzy search.  |
| life_cycle_state           | String  | Specifies the instance lifecycle status in the AS group. <ul style="list-style-type: none"><li>● <b>INSERVICE</b>: The instance is enabled.</li><li>● <b>PENDING</b>: The instance is being added to the AS group.</li><li>● <b>PENDING_WAIT</b>: The instance is waiting to be added to the AS group.</li><li>● <b>REMOVING</b>: The instance is being removed from the AS group.</li><li>● <b>REMOVING_WAIT</b>: The instance is waiting to be removed from the AS group.</li><li>● <b>STANDBY</b>: The instance is in standby state.</li><li>● <b>ENTERING_STANDBY</b>: The instance is entering the standby state.</li></ul> |
| health_status              | String  | Specifies the instance health status. <ul style="list-style-type: none"><li>● <b>INITIALIZING</b>: The instance is being initialized.</li><li>● <b>NORMAL</b>: The instance is functional.</li><li>● <b>ERROR</b>: The instance is faulty.</li></ul>   |
| scaling_configuration_name | String  | Specifies the AS configuration name.   |
| scaling_configuration_id   | String  | Specifies the AS configuration ID.<br>If the returned value is not empty, the instance is an ECS automatically created in a scaling action.<br>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.      |

| 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](#).

### 5.3.2 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 5-77** 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 <a href="#">Querying Instances in an AS Group</a> . |

| Parameter       | Mandatory | Type   | Description   |
|-----------------|-----------|--------|---|
| instance_delete | No        | String | Specifies whether an instance is deleted when it is removed from the AS group.<br>Options: <ul style="list-style-type: none"><li>• <b>no</b> (default): The instance will not be deleted.</li><li>• <b>yes</b>: The instance will be deleted.</li></ul> |

## 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.        |

| 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](#).

### 5.3.3 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 5-78** 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 5-79** Request parameters

| Parameter    | Mandatory | Type             | Description           |
|--------------|-----------|------------------|-----------------------|
| instances_id | Yes       | Array of strings | Specifies the ECS ID. |

| Parameter         | Mandatory | Type   | Description  |
|-------------------|-----------|--------|--|
| instance_delete   | No        | String | <p>Specifies whether to delete an instance when it is removed from an AS group.</p> <p>Options:</p> <ul style="list-style-type: none"> <li>• <b>no</b> (default): The instance will not be deleted.</li> <li>• <b>yes</b>: 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.</li> </ul> <p>This parameter takes effect only when the <b>action</b> is set to <b>REMOVE</b>.</p> |
| instance_appended | No        | String | <p>Specifies whether to add new instances when certain existing instances enter standby mode.</p> <p>Options:</p> <ul style="list-style-type: none"> <li>• <b>no</b> (default): No new instances will be added.</li> <li>• <b>yes</b>: New instances will be added.</li> </ul> <p>This parameter takes effect only when <b>action</b> is set to <b>ENTER_STANDBY</b>.</p>  |

| Parameter | Mandatory | Type   | Description  |
|-----------|-----------|--------|--|
| action    | Yes       | String | <p>Specifies an action to be performed on instances in batches. The options are as follows:</p> <ul style="list-style-type: none"> <li>• <b>ADD</b>: adds instances to the AS group.</li> <li>• <b>REMOVE</b>: removes instances from the AS group.</li> <li>• <b>PROTECT</b>: enables instance protection.</li> <li>• <b>UNPROTECT</b>: disables instance protection.</li> <li>• <b>ENTER_STANDBY</b>: sets instances to standby mode.</li> <li>• <b>EXIT_STANDBY</b>: cancels standby mode for instances.</li> </ul> |

## 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](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](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](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 5-80** 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_group_id    | Yes       | String | Specifies the AS group ID, which can be obtained using the API for querying AS groups. For details, see <a href="#">Querying AS Groups</a> .  |
| scaling_policy_type | Yes       | String | Specifies the AS policy type. <ul style="list-style-type: none"><li>• <b>ALARM</b> (corresponding to <b>alarm_id</b>): indicates that the scaling action is triggered by an alarm.</li><li>• <b>SCHEDULED</b> (corresponding to <b>scheduled_policy</b>): indicates that the scaling action is triggered as scheduled.</li><li>• <b>RECURRENCE</b> (corresponding to <b>scheduled_policy</b>): indicates that the scaling action is triggered periodically.</li></ul> |

| Parameter             | Mandatory | Type   | Description   |
|-----------------------|-----------|--|---|
| alarm_id              | No        | String                                       | <p>Specifies the alarm rule ID. This parameter is mandatory when <b>scaling_policy_type</b> is set to <b>ALARM</b>. After this parameter is specified, the value of <b>scheduled_policy</b> does not take effect.</p> <p>After you create an alarm policy, the system automatically adds an alarm triggering activity of the autoscaling type to the <b>alarm_actions</b> field in the alarm rule specified by the parameter value.</p> <p>You can obtain the parameter value by querying Cloud Eye alarm rules. For details, see <a href="#">Querying the Alarm Rule List</a> in <i>Cloud Eye API Reference</i>.</p> |
| scheduled_policy      | No        | <a href="#">scheduled_policy</a> object      | <p>Specifies the periodic or scheduled AS policy. This parameter is mandatory when <b>scaling_policy_type</b> is set to <b>SCHEDULED</b> or <b>RECURRENCE</b>. After this parameter is specified, the value of <b>alarm_id</b> does not take effect. For details, see <a href="#">Table 5-82</a>.</p>   |
| scaling_policy_action | No        | <a href="#">scaling_policy_action</a> object | <p>Specifies the scaling action of the AS policy. For details, see <a href="#">Table 5-83</a>.</p>  |
| cool_down_time        | No        | Integer                                      | <p>Specifies the cooldown period (in seconds). The value ranges from 0 to 86400 and is 300 by default.</p>  |

**Table 5-82** `scheduled_policy` field description

| Parameter                     | Mandatory | Type   | Description  |
|-------------------------------|-----------|--------|--|
| <code>launch_time</code>      | Yes       | String | <p>Specifies the time when the scaling action is triggered. The time format complies with UTC.</p> <ul style="list-style-type: none"> <li>If <code>scaling_policy_type</code> is set to <b>SCHEDULED</b>, the time format is <b>YYYY-MM-DDThh:mmZ</b>.</li> <li>If <code>scaling_policy_type</code> is set to <b>RECURRENCE</b>, the time format is <b>hh:mm</b>.</li> </ul>   |
| <code>recurrence_type</code>  | No        | String | <p>Specifies the periodic triggering type. This parameter is mandatory when <code>scaling_policy_type</code> is set to <b>RECURRENCE</b>.</p> <ul style="list-style-type: none"> <li><b>Daily</b>: indicates that the scaling action is triggered once a day.</li> <li><b>Weekly</b>: indicates that the scaling action is triggered once a week.</li> <li><b>Monthly</b>: indicates that the scaling action is triggered once a month.</li> </ul>   |
| <code>recurrence_value</code> | No        | String | <p>Specifies the day when a periodic scaling action is triggered. This parameter is mandatory when <code>scaling_policy_type</code> is set to <b>RECURRENCE</b>.</p> <ul style="list-style-type: none"> <li>If <code>recurrence_type</code> is set to <b>Daily</b>, the value is <b>null</b>, indicating that the scaling action is triggered once a day.</li> <li>If <code>recurrence_type</code> is set to <b>Weekly</b>, the value ranges from <b>1</b> (Sunday) to <b>7</b> (Saturday). The digits refer to dates in each week and separated by a comma, such as <b>1,3,5</b>.</li> <li>If <code>recurrence_type</code> is set to <b>Monthly</b>, the value ranges from <b>1</b> to <b>31</b>. The digits refer to the dates in each month and separated by a comma, such as <b>1,10,13,28</b>.</li> </ul> |



| 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 default value is the local time.<br>The time format is <b>YYYY-MM-DDThh:mmZ</b> .  |
| 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 <b>scaling_policy_type</b> is set to <b>RECURRENCE</b> .<br>When the scaling action is triggered periodically, the end time cannot be earlier than the current and start time.<br>The time format is <b>YYYY-MM-DDThh:mmZ</b> . |

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 <b>ADD</b> . <ul style="list-style-type: none"><li>• <b>ADD</b>: adds specified number of instances to the AS group.</li><li>• <b>REMOVE/REDUCE</b>: removes or reduces specified number of instances from the AS group.</li><li>• <b>SET</b>: sets the number of instances in the AS group.</li></ul> |

| Parameter           | Mandatory | Type    | Description   |
|---------------------|-----------|---------|---|
| instance_number     | No        | Integer | <p>Specifies the number of instances to be operated. The default number is <b>1</b>. The value range is as follows for a default quota:</p> <ul style="list-style-type: none"><li>• If <b>operation</b> is set to <b>SET</b>, the value ranges from 0 to 300.</li><li>• If <b>operation</b> is set to <b>ADD</b>, <b>REMOVE</b>, or <b>REDUCE</b>, the value ranges from 1 to 300.</li></ul> <p><b>NOTE</b><br/>Either <b>instance_number</b> or <b>instance_percentage</b> is required.</p>  |
| instance_percentage | No        | Integer | <p>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 <b>operation</b> is set to <b>ADD</b>, <b>REMOVE</b> or <b>REDUCE</b>, the value is an integer from 1 to 20000. If <b>operation</b> is set to <b>SET</b>, the value is an integer from 0 to 20000.</p> <p>If neither <b>instance_number</b> nor <b>instance_percentage</b> is specified, the number of instances to be operated is 1.</p> <p>Either <b>instance_number</b> or <b>instance_percentage</b> is required.</p> |

## 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](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 5-84** 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. |

| Returned Value          | 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](#).

## 5.4.2 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 5-85** Parameter description

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

### Request

**Table 5-86** 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. |

| Parameter             | Mandatory | Type   | Description  |
|-----------------------|-----------|--------|--|
| scaling_resource_id   | Yes       | String | <p>Specifies the scaling resource ID, which is the unique ID of an AS group or bandwidth.</p> <ul style="list-style-type: none"><li>• If <b>scaling_resource_type</b> is set to <b>SCALING_GROUP</b>, this parameter indicates the unique AS group ID.</li><li>• If <b>scaling_resource_type</b> is set to <b>BANDWIDTH</b>, this parameter indicates the unique bandwidth ID.</li></ul> <p><b>NOTE</b><br/>AS cannot scale yearly/monthly bandwidths.</p>   |
| scaling_resource_type | Yes       | String | <p>Specifies the scaling resource type.</p> <ul style="list-style-type: none"><li>• AS group: <b>SCALING_GROUP</b></li><li>• Bandwidth: <b>BANDWIDTH</b></li></ul>   |
| scaling_policy_type   | Yes       | String | <p>Specifies the AS policy type.</p> <ul style="list-style-type: none"><li>• <b>ALARM</b> (corresponding to <b>alarm_id</b>): indicates that the scaling action is triggered by an alarm.</li><li>• <b>SCHEDULED</b> (corresponding to <b>scheduled_policy</b>): indicates that the scaling action is triggered as scheduled.</li><li>• <b>RECURRENCE</b> (corresponding to <b>scheduled_policy</b>): indicates that the scaling action is triggered periodically.</li><li>• <b>INTERVAL_ALARM</b> (corresponding to <b>alarm_id</b>): indicates that the scaling action is triggered by a refined scaling policy.</li></ul> |

| Parameter             | Mandatory | Type   | Description   |
|-----------------------|-----------|--|---|
| alarm_id              | No        | String                                       | <p>Specifies the alarm rule ID. This parameter is mandatory when <b>scaling_policy_type</b> is set to <b>ALARM</b>. After this parameter is specified, the value of <b>scheduled_policy</b> does not take effect.</p> <p>After you create an alarm policy, the system automatically adds an alarm triggering activity of the autoscaling type to the <b>alarm_actions</b> field in the alarm rule specified by the parameter value.</p> <p>You can obtain the parameter value by querying Cloud Eye alarm rules. For details, see <a href="#">Querying the Alarm Rule List</a> in <i>Cloud Eye API Reference</i>.</p> |
| scheduled_policy      | No        | <a href="#">schedule_d_policy</a> object     | <p>Specifies the periodic or scheduled AS policy. This parameter is mandatory when <b>scaling_policy_type</b> is set to <b>SCHEDULED</b> or <b>RECURRENCE</b>. After this parameter is specified, the value of <b>alarm_id</b> does not take effect. For details, see <a href="#">Table 5-87</a>.</p>   |
| scaling_policy_action | No        | <a href="#">scaling_policy_action</a> object | <p>Specifies the scaling action of the AS policy. For details, see <a href="#">Table 5-88</a>.</p>  |
| cool_down_time        | No        | Integer                                      | <p>Specifies the cooldown period (in seconds). The value ranges from 0 to 86400 and is 300 by default.</p>  |
| description           | No        | String                                       | <p>Specifies the description of the AS policy. The value can contain 1 to 256 characters.</p>   |

**Table 5-87** `scheduled_policy` field description

| Parameter                    | Mandatory | Type   | Description  |
|------------------------------|-----------|--------|--|
| <code>launch_time</code>     | Yes       | String | <p>Specifies the time when the scaling action is triggered. The time format complies with UTC.</p> <ul style="list-style-type: none"><li>• If <code>scaling_policy_type</code> is set to <b>SCHEDULED</b>, the time format is <b>YYYY-MM-DDThh:mmZ</b>.</li><li>• If <code>scaling_policy_type</code> is set to <b>RECURRENCE</b>, the time format is <b>hh:mm</b>.</li></ul>  |
| <code>recurrence_type</code> | No        | String | <p>Specifies the periodic triggering type. This parameter is mandatory when <code>scaling_policy_type</code> is set to <b>RECURRENCE</b>.</p> <ul style="list-style-type: none"><li>• <b>Daily</b>: indicates that the scaling action is triggered once a day.</li><li>• <b>Weekly</b>: indicates that the scaling action is triggered once a week.</li><li>• <b>Monthly</b>: indicates that the scaling action is triggered once a month.</li></ul> |

| Parameter        | Mandatory | Type   | Description  |
|------------------|-----------|--------|--|
| recurrence_value | No        | String | <p>Specifies the day when a periodic scaling action is triggered. This parameter is mandatory when <b>scaling_policy_type</b> is set to <b>RECURRENCE</b>.</p> <ul style="list-style-type: none"> <li>If <b>recurrence_type</b> is set to <b>Daily</b>, the value is <b>null</b>, indicating that the scaling action is triggered once a day.</li> <li>If <b>recurrence_type</b> is set to <b>Weekly</b>, the value ranges from <b>1</b> (Sunday) to <b>7</b> (Saturday). The digits refer to dates in each week and separated by a comma, such as <b>1,3,5</b>.</li> <li>If <b>recurrence_type</b> is set to <b>Monthly</b>, the value ranges from <b>1</b> to <b>31</b>. The digits refer to the dates in each month and separated by a comma, such as <b>1,10,13,28</b>.</li> </ul> <p><b>NOTE</b><br/>When <b>recurrence_type</b> is set to <b>Daily</b>, this parameter does not take effect.</p> |
| start_time       | No        | String | <p>Specifies the start time of the scaling action triggered periodically. The time format complies with UTC. The default value is the local time.</p> <p>The time format is <b>YYYY-MM-DDThh:mmZ</b>.</p>  |
| end_time         | No        | String | <p>Specifies the end time of the scaling action triggered periodically. The time format complies with UTC. This parameter is mandatory when <b>scaling_policy_type</b> is set to <b>RECURRENCE</b>. When the scaling action is triggered periodically, the end time cannot be earlier than the current and start time.</p> <p>The time format is <b>YYYY-MM-DDThh:mmZ</b>.</p>   |



**Table 5-88 scaling\_policy\_action** field description

| Parameter | Mandatory | Type    | Description  |
|-----------|-----------|---------|--|
| operation | No        | String  | <p>Specifies the operation to be performed. The default operation is <b>ADD</b>.</p> <ul style="list-style-type: none"> <li>If <b>scaling_resource_type</b> is set to <b>SCALING_GROUP</b>, the following operations are supported: <ul style="list-style-type: none"> <li><b>ADD</b>: indicates adding instances.</li> <li><b>REMOVE/REDUCE</b>: indicates removing or reducing instances.</li> <li><b>SET</b>: indicates setting the number of instances to a specified value.</li> </ul> </li> <li>If <b>scaling_resource_type</b> is set to <b>BANDWIDTH</b>, the following operations are supported: <ul style="list-style-type: none"> <li><b>ADD</b>: indicates adding instances.</li> <li><b>REDUCE</b>: indicates reducing instances.</li> <li><b>SET</b>: indicates setting the number of instances to a specified value.</li> </ul> </li> </ul> |
| size      | No        | Integer | <p>Specifies the operation size. The value is an integer from 0 to 300. The default value is <b>1</b>. This parameter can be set to <b>0</b> only when <b>operation</b> is set to <b>SET</b>.</p> <ul style="list-style-type: none"> <li>If <b>scaling_resource_type</b> is set to <b>SCALING_GROUP</b>, this parameter indicates the number of instances. The value is an integer from 0 to 300 and the default value is <b>1</b>.</li> <li>If <b>scaling_resource_type</b> is set to <b>BANDWIDTH</b>, this parameter indicates the bandwidth (Mbit/s). The value is an integer from 1 to 300 and the default value is <b>1</b>.</li> <li>If <b>scaling_resource_type</b> is set to <b>SCALING_GROUP</b>, either <b>size</b> or <b>percentage</b> can be set.</li> </ul>   |

| Parameter  | Mandatory | Type    | Description   |
|------------|-----------|---------|---|
| percentage | No        | Integer | <p>Specifies the percentage of instances to be operated. If <b>operation</b> is set to <b>ADD</b>, <b>REMOVE</b>, or <b>REDUCE</b>, the value of this parameter is an integer from 1 to 20000. If <b>operation</b> is set to <b>SET</b>, the value is an integer from 0 to 20000.</p> <ul style="list-style-type: none"> <li>If <b>scaling_resource_type</b> is set to <b>SCALING_GROUP</b>, either <b>size</b> or <b>percentage</b> can be set. If neither <b>size</b> nor <b>percentage</b> is set, the default value of <b>size</b> is <b>1</b>.</li> <li>If <b>scaling_resource_type</b> is set to <b>BANDWIDTH</b>, <b>percentage</b> is unavailable.</li> </ul> |
| limits     | No        | Integer | <p>Specifies the operation restrictions. If <b>scaling_resource_type</b> is set to <b>BANDWIDTH</b> and <b>operation</b> is not <b>SET</b>, this parameter takes effect and the unit is Mbit/s.</p> <ul style="list-style-type: none"> <li>If <b>operation</b> is set to <b>ADD</b>, this parameter indicates the maximum bandwidth allowed.</li> <li>If <b>operation</b> is set to <b>REDUCE</b>, this parameter indicates the minimum bandwidth allowed.</li> </ul>   |

## Example Request

This example creates an alarm-based scaling policy named **hth\_aspolicy\_1** using the alarm rule with ID **al1513822380493GvJKZwA8**. 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](https://{Endpoint}/autoscaling-api/v2/{project_id}/scaling_policy)

```
{
  "alarm_id": "al1513822380493GvJKZwA8",
  "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 5-89** 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.                             |

| 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](#).

### 5.4.3 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 5-90** 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 <a href="#">Querying AS Policies Bound to an AS Group</a> . |

#### 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. |

| Parameter             | Mandatory | Type   | Description   |
|-----------------------|-----------|--|---|
| scaling_policy_type   | No        | String                                       | <p>Specifies the AS policy type.</p> <ul style="list-style-type: none"> <li>• <b>ALARM</b> (corresponding to <b>alarm_id</b>): indicates that the scaling action is triggered by an alarm.</li> <li>• <b>SCHEDULED</b> (corresponding to <b>scheduled_policy</b>): indicates that the scaling action is triggered as scheduled.</li> <li>• <b>RECURRENCE</b> (corresponding to <b>scheduled_policy</b>): indicates that the scaling action is triggered periodically.</li> </ul>  |
| alarm_id              | No        | String                                       | <p>Specifies the alarm rule ID. This parameter is mandatory when <b>scaling_policy_type</b> is set to <b>ALARM</b>. After this parameter is specified, the value of <b>scheduled_policy</b> does not take effect.</p> <p>After you modify an alarm policy, the system automatically adds an alarm triggering activity of the autoscaling type to the <b>alarm_actions</b> field in the alarm rule specified by the parameter value.</p> <p>You can obtain the parameter value by querying Cloud Eye alarm rules. For details, see <a href="#">Querying the Alarm Rule List</a> in <i>Cloud Eye API Reference</i>.</p> |
| scheduled_policy      | No        | <a href="#">scheduled_policy</a> object      | <p>Specifies the periodic or scheduled AS policy. This parameter is mandatory when <b>scaling_policy_type</b> is set to <b>SCHEDULED</b> or <b>RECURRENCE</b>. After this parameter is specified, the value of <b>alarm_id</b> does not take effect. For details, see <a href="#">Table 5-92</a>.</p>   |
| scaling_policy_action | No        | <a href="#">scaling_policy_action</a> object | <p>Specifies the scaling action of the AS policy. For details, see <a href="#">Table 5-93</a>.</p>  |

| Parameter      | Mandatory | Type    | Description   |
|----------------|-----------|---------|---|
| cool_down_time | No        | Integer | Specifies the cooldown period (in seconds). The value ranges from 0 to 86400. |

**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. <ul style="list-style-type: none"><li>• If <b>scaling_policy_type</b> is set to <b>SCHEDULED</b>, the time format is <b>YYYY-MM-DDThh:mmZ</b>.</li><li>• If <b>scaling_policy_type</b> is set to <b>RECURRENCE</b>, the time format is <b>hh:mm</b>.</li></ul>   |
| recurrence_type | No        | String | Specifies the periodic triggering type. This parameter is mandatory when <b>scaling_policy_type</b> is set to <b>RECURRENCE</b> . <ul style="list-style-type: none"><li>• <b>Daily</b>: indicates that the scaling action is triggered once a day.</li><li>• <b>Weekly</b>: indicates that the scaling action is triggered once a week.</li><li>• <b>Monthly</b>: indicates that the scaling action is triggered once a month.</li></ul> |

| Parameter        | Mandatory | Type   | Description  |
|------------------|-----------|--------|--|
| recurrence_value | No        | String | <p>Specifies the day when a periodic scaling action is triggered. This parameter is mandatory when <b>scaling_policy_type</b> is set to <b>RECURRENCE</b>.</p> <ul style="list-style-type: none"> <li>If <b>recurrence_type</b> is set to <b>Daily</b>, the value is <b>null</b>, indicating that the scaling action is triggered once a day.</li> <li>If <b>recurrence_type</b> is set to <b>Weekly</b>, the value ranges from <b>1</b> (Sunday) to <b>7</b> (Saturday). The digits refer to dates in each week and separated by a comma, such as <b>1,3,5</b>.</li> <li>If <b>recurrence_type</b> is set to <b>Monthly</b>, the value ranges from <b>1</b> to <b>31</b>. The digits refer to the dates in each month and separated by a comma, such as <b>1,10,13,28</b>.</li> </ul> |
| start_time       | No        | String | <p>Specifies the start time of the scaling action triggered periodically. The time format complies with UTC.</p> <p>The time format is <b>YYYY-MM-DDThh:mmZ</b>.</p>   |
| end_time         | No        | String | <p>Specifies the end time of the scaling action triggered periodically. The time format complies with UTC. This parameter is mandatory when <b>scaling_policy_type</b> is set to <b>RECURRENCE</b>.</p> <p>When the scaling action is triggered periodically, the end time cannot be earlier than the current and start time.</p> <p>The time format is <b>YYYY-MM-DDThh:mmZ</b>.</p>  |

**Table 5-93 scaling\_policy\_action** field description

| Parameter           | Mandatory | Type    | Description   |
|---------------------|-----------|---------|---|
| operation           | No        | String  | <p>Specifies the operation to be performed. The default operation is <b>ADD</b>.</p> <ul style="list-style-type: none"> <li>• <b>ADD</b>: adds specified number of instances to the AS group.</li> <li>• <b>REMOVE/REDUCE</b>: removes or reduces specified number of instances from the AS group.</li> <li>• <b>SET</b>: sets the number of instances in the AS group.</li> </ul>  |
| instance_number     | No        | Integer | <p>Specifies the number of instances to be operated. The default number is <b>1</b>. The value range is as follows for a default quota:</p> <ul style="list-style-type: none"> <li>• If <b>operation</b> is set to <b>SET</b>, the value ranges from 0 to 300.</li> <li>• If <b>operation</b> is set to <b>ADD</b>, <b>REMOVE</b>, or <b>REDUCE</b>, the value ranges from 1 to 300.</li> </ul> <p><b>NOTE</b><br/>Either <b>instance_number</b> or <b>instance_percentage</b> is required.</p>   |
| instance_percentage | No        | Integer | <p>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 <b>operation</b> is set to <b>ADD</b>, <b>REMOVE</b> or <b>REDUCE</b>, the value is an integer from 1 to 20000. If <b>operation</b> is set to <b>SET</b>, the value is an integer from 0 to 20000.</p> <p>If neither <b>instance_number</b> nor <b>instance_percentage</b> is specified, the number of instances to be operated is 1.</p> <p>Either <b>instance_number</b> or <b>instance_percentage</b> is required.</p> |

## 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": "RECURRENT",
  "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 5-94** 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 <a href="#">Querying AS Policies Bound to a Scaling Resource (V2)</a> . |

## Request

**Table 5-95** 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. <ul style="list-style-type: none"> <li>• <b>ALARM</b> (corresponding to <b>alarm_id</b>): indicates that the scaling action is triggered by an alarm.</li> <li>• <b>SCHEDULED</b> (corresponding to <b>scheduled_policy</b>): indicates that the scaling action is triggered as scheduled.</li> <li>• <b>RECURRENCE</b> (corresponding to <b>scheduled_policy</b>): indicates that the scaling action is triggered periodically.</li> <li>• <b>INTERVAL_ALARM</b> (corresponding to <b>alarm_id</b>): indicates that the scaling action is triggered by a refined scaling policy.</li> </ul> |
| scaling_resource_id   | No        | String | Specifies the scaling resource ID, which is the ID of a unique AS group or bandwidth.  |
| scaling_resource_type | No        | String | Specifies the scaling resource type. <ul style="list-style-type: none"> <li>• AS group: <b>SCALING_GROUP</b></li> <li>• Bandwidth: <b>BANDWIDTH</b></li> </ul>   |

| Parameter             | Mandatory | Type   | Description   |
|-----------------------|-----------|--|---|
| alarm_id              | No        | String                                       | <p>Specifies the alarm rule ID. This parameter is mandatory when <b>scaling_policy_type</b> is set to <b>ALARM</b>. After this parameter is specified, the value of <b>scheduled_policy</b> does not take effect.</p> <p>After you modify an alarm policy, the system automatically adds an alarm triggering activity of the autoscaling type to the <b>alarm_actions</b> field in the alarm rule specified by the parameter value.</p> <p>You can obtain the parameter value by querying Cloud Eye alarm rules. For details, see <a href="#">Querying Alarm Rules</a> in <i>Cloud Eye API Reference</i>.</p> |
| scheduled_policy      | No        | <a href="#">scheduled_policy</a> object      | <p>Specifies the periodic or scheduled AS policy. This parameter is mandatory when <b>scaling_policy_type</b> is set to <b>SCHEDULED</b> or <b>RECURRENCE</b>. After this parameter is specified, the value of <b>alarm_id</b> does not take effect. For details, see <a href="#">Table 5-96</a>.</p>   |
| scaling_policy_action | No        | <a href="#">scaling_policy_action</a> object | <p>Specifies the scaling action of the AS policy. For details, see <a href="#">Table 5-97</a>.</p>  |
| cool_down_time        | No        | Integer                                      | <p>Specifies the cooldown period (in seconds). The value ranges from 0 to 86400.</p>  |
| description           | No        | String                                       | <p>Specifies the description of the AS policy. The value can contain 1 to 256 characters.</p>   |

**Table 5-96** `scheduled_policy` field description

| Parameter                     | Mandatory | Type   | Description  |
|-------------------------------|-----------|--------|--|
| <code>launch_time</code>      | Yes       | String | <p>Specifies the time when the scaling action is triggered. The time format complies with UTC.</p> <ul style="list-style-type: none"> <li>If <code>scaling_policy_type</code> is set to <b>SCHEDULED</b>, the time format is <b>YYYY-MM-DDThh:mmZ</b>.</li> <li>If <code>scaling_policy_type</code> is set to <b>RECURRENCE</b>, the time format is <b>hh:mm</b>.</li> </ul>   |
| <code>recurrence_type</code>  | No        | String | <p>Specifies the periodic triggering type. This parameter is mandatory when <code>scaling_policy_type</code> is set to <b>RECURRENCE</b>.</p> <ul style="list-style-type: none"> <li><b>Daily</b>: indicates that the scaling action is triggered once a day.</li> <li><b>Weekly</b>: indicates that the scaling action is triggered once a week.</li> <li><b>Monthly</b>: indicates that the scaling action is triggered once a month.</li> </ul>   |
| <code>recurrence_value</code> | No        | String | <p>Specifies the day when a periodic scaling action is triggered. This parameter is mandatory when <code>scaling_policy_type</code> is set to <b>RECURRENCE</b>.</p> <ul style="list-style-type: none"> <li>If <code>recurrence_type</code> is set to <b>Daily</b>, the value is <b>null</b>, indicating that the scaling action is triggered once a day.</li> <li>If <code>recurrence_type</code> is set to <b>Weekly</b>, the value ranges from <b>1</b> (Sunday) to <b>7</b> (Saturday). The digits refer to dates in each week and separated by a comma, such as <b>1,3,5</b>.</li> <li>If <code>recurrence_type</code> is set to <b>Monthly</b>, the value ranges from <b>1</b> to <b>31</b>. The digits refer to the dates in each month and separated by a comma, such as <b>1,10,13,28</b>.</li> </ul> |

| Parameter  | Mandatory | Type   | Description  |
|------------|-----------|--------|--|
| start_time | No        | String | Specifies the start time of the scaling action triggered periodically. The time format complies with UTC.<br>The time format is <b>YYYY-MM-DDThh:mmZ</b> .   |
| 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 <b>scaling_policy_type</b> is set to <b>RECURRENCE</b> .<br>When the scaling action is triggered periodically, the end time cannot be earlier than the current and start time.<br>The time format is <b>YYYY-MM-DDThh:mmZ</b> . |

**Table 5-97 scaling\_policy\_action** field description

| Parameter | Mandatory | Type    | Description  |
|-----------|-----------|---------|--|
| operation | No        | String  | <p>Specifies the operation to be performed. The default operation is <b>ADD</b>.</p> <ul style="list-style-type: none"> <li>• If <b>scaling_resource_type</b> is set to <b>SCALING_GROUP</b>, the following operations are supported: <ul style="list-style-type: none"> <li>– <b>ADD</b>: indicates adding instances.</li> <li>– <b>REMOVE/REDUCE</b>: indicates removing or reducing instances.</li> <li>– <b>SET</b>: indicates setting the number of instances to a specified value.</li> </ul> </li> <li>• If <b>scaling_resource_type</b> is set to <b>BANDWIDTH</b>, the following operations are supported: <ul style="list-style-type: none"> <li>– <b>ADD</b>: indicates adding instances.</li> <li>– <b>REDUCE</b>: indicates reducing instances.</li> <li>– <b>SET</b>: indicates setting the number of instances to a specified value.</li> </ul> </li> </ul> |
| size      | No        | Integer | <p>Specifies the operation size. The value is an integer from 0 to 300. The default value is <b>1</b>. This parameter can be set to <b>0</b> only when <b>operation</b> is set to <b>SET</b>.</p> <ul style="list-style-type: none"> <li>• If <b>scaling_resource_type</b> is set to <b>SCALING_GROUP</b>, this parameter indicates the number of instances. The value is an integer from 0 to 300 and the default value is <b>1</b>.</li> <li>• If <b>scaling_resource_type</b> is set to <b>BANDWIDTH</b>, this parameter indicates the bandwidth (Mbit/s). The value is an integer from 1 to 300 and the default value is <b>1</b>.</li> <li>• If <b>scaling_resource_type</b> is set to <b>SCALING_GROUP</b>, either <b>size</b> or <b>percentage</b> can be set.</li> </ul>   |

| Parameter  | Mandatory | Type    | Description  |
|------------|-----------|---------|--|
| percentage | No        | Integer | <p>Specifies the percentage of instances to be operated. If <b>operation</b> is set to <b>ADD</b>, <b>REMOVE</b>, or <b>REDUCE</b>, the value of this parameter is an integer from 1 to 20000. If <b>operation</b> is set to <b>SET</b>, the value is an integer from 0 to 20000.</p> <ul style="list-style-type: none"> <li>If <b>scaling_resource_type</b> is set to <b>SCALING_GROUP</b>, either <b>size</b> or <b>percentage</b> can be set. If neither <b>size</b> nor <b>percentage</b> is set, the default value of <b>size</b> is 1.</li> <li>If <b>scaling_resource_type</b> is set to <b>BANDWIDTH</b>, <b>percentage</b> is unavailable.</li> </ul> |
| limits     | No        | Integer | <p>Specifies the operation restrictions. If <b>scaling_resource_type</b> is set to <b>BANDWIDTH</b> and <b>operation</b> is not <b>SET</b>, this parameter takes effect and the unit is Mbit/s.</p> <ul style="list-style-type: none"> <li>If <b>operation</b> is set to <b>ADD</b>, this parameter indicates the maximum bandwidth allowed.</li> <li>If <b>operation</b> is set to <b>REDUCE</b>, this parameter indicates the minimum bandwidth allowed.</li> </ul>  |

## 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 **al1513822380493GvJKZwA8**, 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": "al1513822380493GvJKZwA8",
  "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 5-98** 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. |

| Returned Value          | 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](#).

## 5.4.5 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 5-99** 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.<br>Supports fuzzy search. |

| Parameter           | Mandatory | Type    | Description  |
|---------------------|-----------|---------|--|
| scaling_policy_type | No        | String  | Specifies the AS policy type. <ul style="list-style-type: none"><li>• <b>ALARM</b>: alarm policy</li><li>• <b>SCHEDULED</b>: scheduled policy</li><li>• <b>RECURRENCE</b>: periodic policy</li></ul> |
| scaling_policy_id   | No        | String  | Specifies the AS policy ID.  |
| start_number        | No        | Integer | Specifies the start line number. The default value is <b>0</b> . The minimum parameter value is <b>0</b> .   |
| limit               | No        | Integer | Specifies the number of query records. The default value is <b>20</b> . 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 5-100** 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 <a href="#">scaling_policies</a> objects | Specifies scaling policies. For details, see <a href="#">Table 5-101</a> . |

**Table 5-101 scaling\_policies** field description

| Parameter             | Type                                | Description  |
|-----------------------|-------------------------------------|--|
| scaling_group_id      | String                              | Specifies the AS group ID.   |
| scaling_policy_name   | String                              | Specifies the AS policy name.  |
| scaling_policy_id     | String                              | Specifies the AS policy ID.  |
| policy_status         | String                              | Specifies the AS policy status. <ul style="list-style-type: none"> <li>• <b>INSERVICE</b>: The AS policy is enabled.</li> <li>• <b>PAUSED</b>: The AS policy is disabled.</li> <li>• <b>EXECUTING</b>: The AS policy is being executed.</li> </ul>   |
| scaling_policy_type   | String                              | Specifies the AS policy type. <ul style="list-style-type: none"> <li>• <b>ALARM</b>: indicates that the scaling action is triggered by an alarm. A value is returned for <b>alarm_id</b>, and no value is returned for <b>scheduled_policy</b>.</li> <li>• <b>SCHEDULED</b>: indicates that the scaling action is triggered as scheduled. A value is returned for <b>scheduled_policy</b>, and no value is returned for <b>alarm_id</b>, <b>recurrence_type</b>, <b>recurrence_value</b>, <b>start_time</b>, or <b>end_time</b>.</li> <li>• <b>RECURRENCE</b>: indicates that the scaling action is triggered periodically. Values are returned for <b>scheduled_policy</b>, <b>recurrence_type</b>, <b>recurrence_value</b>, <b>start_time</b>, and <b>end_time</b>, and no value is returned for <b>alarm_id</b>.</li> </ul> |
| alarm_id              | String                              | Specifies the alarm ID.  |
| scheduled_policy      | <b>scheduled_policy</b> object      | Specifies the periodic or scheduled AS policy. For details, see <a href="#">Table 5-102</a> .  |
| scaling_policy_action | <b>scaling_policy_action</b> object | Specifies the scaling action of the AS policy. For details, see <a href="#">Table 5-103</a> .  |
| 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 5-102** `scheduled_policy` field description

| Parameter                     | Type   | Description  |
|-------------------------------|--------|--|
| <code>launch_time</code>      | String | <p>Specifies the time when the scaling action is triggered. The time format complies with UTC.</p> <ul style="list-style-type: none"> <li>If <code>scaling_policy_type</code> is set to <b>SCHEDULED</b>, the time format is <b>YYYY-MM-DDThh:mmZ</b>.</li> <li>If <code>scaling_policy_type</code> is set to <b>RECURRENCE</b>, the time format is <b>hh:mm</b>.</li> </ul>   |
| <code>recurrence_type</code>  | String | <p>Specifies the type of a periodically triggered scaling action.</p> <ul style="list-style-type: none"> <li><b>Daily</b>: indicates that the scaling action is triggered once a day.</li> <li><b>Weekly</b>: indicates that the scaling action is triggered once a week.</li> <li><b>Monthly</b>: indicates that the scaling action is triggered once a month.</li> </ul>   |
| <code>recurrence_value</code> | String | <p>Specifies the frequency at which scaling actions are triggered.</p> <ul style="list-style-type: none"> <li>If <code>recurrence_type</code> is set to <b>Daily</b>, the value is <b>null</b>, indicating that the scaling action is triggered once a day.</li> <li>If <code>recurrence_type</code> is set to <b>Weekly</b>, the value ranges from <b>1</b> (Sunday) to <b>7</b> (Saturday). The digits refer to dates in each week and separated by a comma, such as <b>1,3,5</b>.</li> <li>If <code>recurrence_type</code> is set to <b>Monthly</b>, the value ranges from <b>1</b> to <b>31</b>. The digits refer to the dates in each month and separated by a comma, such as <b>1,10,13,28</b>.</li> </ul> |
| <code>start_time</code>       | String | <p>Specifies the start time of the scaling action triggered periodically. The time format complies with UTC.</p> <p>The time format is <b>YYYY-MM-DDThh:mmZ</b>.</p>   |
| <code>end_time</code>         | String | <p>Specifies the end time of the scaling action triggered periodically. The time format complies with UTC.</p> <p>The time format is <b>YYYY-MM-DDThh:mmZ</b>.</p>   |

**Table 5-103 scaling\_policy\_action** field description

| Parameter           | Type    | Description   |
|---------------------|---------|---|
| operation           | String  | Specifies the scaling action. <ul style="list-style-type: none"> <li>• <b>ADD</b>: adds specified number of instances to the AS group.</li> <li>• <b>REMOVE</b>: removes specified number of instances from the AS group.</li> <li>• <b>SET</b>: sets the number of instances in the AS group.</li> </ul> |
| 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. |

| 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](#).

## 5.4.6 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 5-104** 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.<br>Supports fuzzy search.  |
| scaling_policy_type | No        | String  | Specifies the AS policy type. <ul style="list-style-type: none"><li>● <b>ALARM</b>: alarm policy</li><li>● <b>SCHEDULED</b>: scheduled policy</li><li>● <b>RECURRENCE</b>: periodic policy</li><li>● <b>INTERVAL_ALARM</b> (corresponding to <b>alarm_id</b>): indicates that the scaling action is triggered by a refined scaling policy.</li></ul> |
| scaling_policy_id   | No        | String  | Specifies the AS policy ID.  |
| start_number        | No        | Integer | Specifies the start line number. The default value is <b>0</b> . The minimum parameter value is <b>0</b> .   |
| limit               | No        | Integer | Specifies the number of query records. The default value is <b>20</b> . 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 5-105** 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 <a href="#">scaling_policies</a> objects | Specifies AS policies. For details, see <a href="#">Table 5-106</a> . |

**Table 5-106** `scaling_policies` field description

| Parameter             | Type   | Description  |
|-----------------------|--------|--|
| scaling_policy_name   | String | Specifies the AS policy name.<br>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. <ul style="list-style-type: none"><li>AS group: <b>SCALING_GROUP</b></li><li>Bandwidth: <b>BANDWIDTH</b></li></ul>  |
| policy_status         | String | Specifies the AS policy status. <ul style="list-style-type: none"><li><b>INSERVICE</b>: The AS policy is enabled.</li><li><b>PAUSED</b>: The AS policy is disabled.</li><li><b>EXECUTING</b>: The AS policy is being executed.</li></ul> |

| Parameter             | Type   | Description  |
|-----------------------|--|--|
| scaling_policy_type   | String                                       | Specifies the AS policy type. <ul style="list-style-type: none"><li>• <b>ALARM</b>: indicates that the scaling action is triggered by an alarm. A value is returned for <b>alarm_id</b>, and no value is returned for <b>scheduled_policy</b>.</li><li>• <b>SCHEDULED</b>: indicates that the scaling action is triggered as scheduled. A value is returned for <b>scheduled_policy</b>, and no value is returned for <b>alarm_id</b>, <b>recurrence_type</b>, <b>recurrence_value</b>, <b>start_time</b>, or <b>end_time</b>.</li><li>• <b>RECURRENCE</b>: indicates that the scaling action is triggered periodically. Values are returned for <b>scheduled_policy</b>, <b>recurrence_type</b>, <b>recurrence_value</b>, <b>start_time</b>, and <b>end_time</b>, and no value is returned for <b>alarm_id</b>.</li><li>• <b>INTERVAL_ALARM</b>: indicates that the scaling action is triggered by a refined scaling policy. A value is returned for <b>alarm_id</b>, and no value is returned for <b>scheduled_policy</b>.</li></ul> |
| alarm_id              | String                                       | Specifies the alarm ID.  |
| scheduled_policy      | <a href="#">scheduled_policy</a> object      | Specifies the periodic or scheduled AS policy. For details, see <a href="#">Table 5-107</a> .  |
| scaling_policy_action | <a href="#">scaling_policy_action</a> object | Specifies the scaling action of the AS policy. For details, see <a href="#">Table 5-108</a> .  |
| 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             | <a href="#">meta_data</a> object             | Provides additional information. For details, see <a href="#">Table 5-109</a> .  |
| description           | String                                       | Specifies the AS policy description.   |

**Table 5-107** `scheduled_policy` field description

| Parameter                     | Type   | Description  |
|-------------------------------|--------|--|
| <code>launch_time</code>      | String | <p>Specifies the time when the scaling action is triggered. The time format complies with UTC.</p> <ul style="list-style-type: none"> <li>If <code>scaling_policy_type</code> is set to <b>SCHEDULED</b>, the time format is <b>YYYY-MM-DDThh:mmZ</b>.</li> <li>If <code>scaling_policy_type</code> is set to <b>RECURRENCE</b>, the time format is <b>hh:mm</b>.</li> </ul>   |
| <code>recurrence_type</code>  | String | <p>Specifies the type of a periodically triggered scaling action.</p> <ul style="list-style-type: none"> <li><b>Daily</b>: indicates that the scaling action is triggered once a day.</li> <li><b>Weekly</b>: indicates that the scaling action is triggered once a week.</li> <li><b>Monthly</b>: indicates that the scaling action is triggered once a month.</li> </ul>   |
| <code>recurrence_value</code> | String | <p>Specifies the frequency at which scaling actions are triggered.</p> <ul style="list-style-type: none"> <li>If <code>recurrence_type</code> is set to <b>Daily</b>, the value is <b>null</b>, indicating that the scaling action is triggered once a day.</li> <li>If <code>recurrence_type</code> is set to <b>Weekly</b>, the value ranges from <b>1</b> (Sunday) to <b>7</b> (Saturday). The digits refer to dates in each week and separated by a comma, such as <b>1,3,5</b>.</li> <li>If <code>recurrence_type</code> is set to <b>Monthly</b>, the value ranges from <b>1</b> to <b>31</b>. The digits refer to the dates in each month and separated by a comma, such as <b>1,10,13,28</b>.</li> </ul> |
| <code>start_time</code>       | String | <p>Specifies the start time of the scaling action triggered periodically. The time format complies with UTC.</p> <p>The time format is <b>YYYY-MM-DDThh:mmZ</b>.</p>   |
| <code>end_time</code>         | String | <p>Specifies the end time of the scaling action triggered periodically. The time format complies with UTC.</p> <p>The time format is <b>YYYY-MM-DDThh:mmZ</b>.</p>   |

**Table 5-108 scaling\_policy\_action** field description

| Parameter  | Type    | Description  |
|------------|---------|--|
| operation  | String  | Specifies the scaling action. <ul style="list-style-type: none"><li>● <b>ADD</b>: indicates adding instances.</li><li>● <b>REDUCE</b>: indicates reducing instances.</li><li>● <b>SET</b>: indicates setting the number of instances to a specified value.</li></ul> |
| 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 5-109 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": "RECURRENT",
      "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": "RECURRENT",
      "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": "RECURRENT",
      "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.                          |

| Returned Values                   | 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](#).

### 5.4.7 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, enterprise project 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.

#### NOTE

The bandwidth scaling policy configured for a released EIP still occupies the quota of bandwidth scaling policy. The policy is only visible to the Huawei Cloud account and its IAM users with the global permissions.

## 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 5-110** 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. <ul style="list-style-type: none"> <li>AS group: <b>SCALING_GROUP</b></li> <li>Bandwidth: <b>BANDWIDTH</b></li> </ul>  |
| scaling_policy_name   | No        | String  | Specifies the AS policy name. Supports fuzzy search.  |
| scaling_policy_id     | No        | String  | Specifies the AS policy ID.   |
| scaling_policy_type   | No        | String  | Specifies the AS policy type. <ul style="list-style-type: none"> <li><b>ALARM</b>: alarm policy</li> <li><b>SCHEDULED</b>: scheduled policy</li> <li><b>RECURRENCE</b>: periodic policy</li> <li><b>INTERVAL_ALARM</b> (corresponding to <b>alarm_id</b>): indicates that the scaling action is triggered by a refined scaling policy.</li> </ul> |
| start_number          | No        | Integer | Specifies the start line number. The default value is <b>0</b> . The minimum parameter value is <b>0</b> .  |
| limit                 | No        | Integer | Specifies the number of query records. The default value is <b>20</b> . The value ranges from 0 to 100.   |

| Parameter | Mandatory | Type   | Description   |
|-----------|-----------|--------|---|
| sort_by   | No        | String | <p>Specifies the sorting method.</p> <ul style="list-style-type: none"> <li>● <b>POLICY_NAME</b>: AS policies are sorted by name.</li> <li>● <b>TRIGGER_CONDITION</b>: 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.</li> <li>● <b>CREATE_TIME</b>: AS policies are sorted based on the creation time.</li> </ul> |
| order     | No        | String | <p>Specifies the sorting order.</p> <ul style="list-style-type: none"> <li>● <b>ASC</b>: ascending order</li> <li>● <b>DESC</b>: descending order</li> </ul>  |



| Parameter             | Mandatory | Type   | Description  |
|-----------------------|-----------|--------|--|
| enterprise_project_id | No        | String | <p>Specifies the enterprise project ID.</p> <ul style="list-style-type: none"> <li>If <b>scaling_resource_type</b> is set to <b>SCALING_GROUP</b> and <b>all_granted_eps</b> is transferred: <ul style="list-style-type: none"> <li>When you use an account on Huawei Cloud or its IAM user with global permissions, this API will query scaling policies of the AS groups in all enterprise projects.</li> <li>When you use an IAM user with permissions to specific enterprise projects, this API will query scaling policies of the AS groups in these enterprise projects.</li> </ul> </li> </ul> <p><b>NOTE</b><br/>If the IAM user has permissions to more than 100 enterprise projects, this API will query only the AS policies of AS groups in the first 100 enterprise projects.</p> <ul style="list-style-type: none"> <li>If <b>scaling_resource_type</b> is set to <b>BANDWIDTH</b> and <b>all_granted_eps</b> is transferred: <ul style="list-style-type: none"> <li>When you use an account on Huawei Cloud or its IAM user with global permissions, this API will query scaling policies of the bandwidths in all enterprise projects.</li> <li>When you use an IAM user with permissions to specific enterprise projects, this API will query the scaling policies of bandwidths in the enterprise projects specified by <b>all_granted_eps</b>. For details, see <a href="#">Querying Bandwidths</a> in <i>Elastic IP API Reference</i>.</li> </ul> </li> <li>If <b>scaling_resource_type</b> is not specified and <b>all_granted_eps</b> is transferred: <ul style="list-style-type: none"> <li>When you use an account on Huawei Cloud or its IAM user with global permissions,</li> </ul> </li> </ul> |

| Parameter | Mandatory | Type   | Description   |
|-----------|-----------|--------|---|
|           |           |        | <p>this API will query scaling policies of the AS groups and bandwidths in all enterprise projects.</p> <ul style="list-style-type: none"> <li>When you use an IAM user with permissions to specific enterprise projects, this API will query the scaling policies of AS groups and bandwidths in the enterprise projects.</li> </ul> <p><b>NOTE</b><br/>If the IAM user has permissions to more than 100 enterprise projects, this API will only query the scaling policies of AS groups in the first 100 enterprise projects, as well as the scaling policies of bandwidths in the enterprise projects specified by <b>all_granted_eps</b>. For details, see <a href="#">Querying Bandwidths</a>.</p> |
| 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 5-111** 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. |

| Parameter        | Type  | Description   |
|------------------|---|---|
| scaling_policies | Array of <a href="#">scaling_policies</a> objects | Specifies AS policies. For details, see <a href="#">Table 5-112</a> . |

**Table 5-112** 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. <ul style="list-style-type: none"> <li>AS group: <b>SCALING_GROUP</b></li> <li>Bandwidth: <b>BANDWIDTH</b></li> </ul>  |
| policy_status         | String | Specifies the AS policy status. <ul style="list-style-type: none"> <li><b>INSERVICE</b>: The AS policy is enabled.</li> <li><b>PAUSED</b>: The AS policy is disabled.</li> <li><b>EXECUTING</b>: The AS policy is being executed.</li> </ul>  |
| scaling_policy_type   | String | Specifies the AS policy type. <ul style="list-style-type: none"> <li><b>ALARM</b>: indicates that the scaling action is triggered by an alarm. A value is returned for <b>alarm_id</b>, and no value is returned for <b>scheduled_policy</b>.</li> <li><b>SCHEDULED</b>: indicates that the scaling action is triggered as scheduled. A value is returned for <b>scheduled_policy</b>, and no value is returned for <b>alarm_id</b>, <b>recurrence_type</b>, <b>recurrence_value</b>, <b>start_time</b>, or <b>end_time</b>.</li> <li><b>RECURRENCE</b>: indicates that the scaling action is triggered periodically. Values are returned for <b>scheduled_policy</b>, <b>recurrence_type</b>, <b>recurrence_value</b>, <b>start_time</b>, and <b>end_time</b>, and no value is returned for <b>alarm_id</b>.</li> <li><b>INTERVAL_ALARM</b>: indicates that the scaling action is triggered by a refined scaling policy. A value is returned for <b>alarm_id</b>, and no value is returned for <b>scheduled_policy</b>.</li> </ul> |

| Parameter             | Type   | Description   |
|-----------------------|--|---|
| alarm_id              | String                                       | Specifies the alarm ID.   |
| scheduled_policy      | <a href="#">scheduled_policy</a> object      | Specifies the periodic or scheduled AS policy. For details, see <a href="#">Table 5-113</a> . |
| scaling_policy_action | <a href="#">scaling_policy_action</a> object | Specifies the scaling action of the AS policy. For details, see <a href="#">Table 5-114</a> . |
| 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             | <a href="#">meta_data</a> object             | Provides additional information. For details, see <a href="#">Table 5-115</a> .               |
| description           | String                                       | Specifies the AS policy description.  |

**Table 5-113** `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. <ul style="list-style-type: none"><li>• If <code>scaling_policy_type</code> is set to <b>SCHEDULED</b>, the time format is <b>YYYY-MM-DDThh:mmZ</b>.</li><li>• If <code>scaling_policy_type</code> is set to <b>RECURRENCE</b>, the time format is <b>hh:mm</b>.</li></ul> |
| recurrence_type | String | Specifies the type of a periodically triggered scaling action. <ul style="list-style-type: none"><li>• <b>Daily</b>: indicates that the scaling action is triggered once a day.</li><li>• <b>Weekly</b>: indicates that the scaling action is triggered once a week.</li><li>• <b>Monthly</b>: indicates that the scaling action is triggered once a month.</li></ul>  |

| Parameter        | Type   | Description  |
|------------------|--------|--|
| recurrence_value | String | <p>Specifies the frequency at which scaling actions are triggered.</p> <ul style="list-style-type: none"> <li>If <b>recurrence_type</b> is set to <b>Daily</b>, the value is <b>null</b>, indicating that the scaling action is triggered once a day.</li> <li>If <b>recurrence_type</b> is set to <b>Weekly</b>, the value ranges from <b>1</b> (Sunday) to <b>7</b> (Saturday). The digits refer to dates in each week and separated by a comma, such as <b>1,3,5</b>.</li> <li>If <b>recurrence_type</b> is set to <b>Monthly</b>, the value ranges from <b>1</b> to <b>31</b>. The digits refer to the dates in each month and separated by a comma, such as <b>1,10,13,28</b>.</li> </ul> |
| start_time       | String | <p>Specifies the start time of the scaling action triggered periodically. The time format complies with UTC.</p> <p>The time format is <b>YYYY-MM-DDThh:mmZ</b>.</p>   |
| end_time         | String | <p>Specifies the end time of the scaling action triggered periodically. The time format complies with UTC.</p> <p>The time format is <b>YYYY-MM-DDThh:mmZ</b>.</p>   |

**Table 5-114 scaling\_policy\_action** field description

| Parameter  | Type    | Description   |
|------------|---------|---|
| operation  | String  | <p>Specifies the scaling action.</p> <ul style="list-style-type: none"> <li><b>ADD</b>: indicates adding instances.</li> <li><b>REDUCE</b>: indicates reducing instances.</li> <li><b>SET</b>: indicates setting the number of instances to a specified value.</li> </ul> |
| 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 5-115 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": "RECURRENT",
      "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": "RECURRENT",
      "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": "RECURRENT",
  "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.      |

| Returned Values         | 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](#).

## 5.4.8 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 5-116** 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 5-117** Response parameters

| Parameter      | Type                                  | Description   |
|----------------|---------------------------------------|---|
| scaling_policy | <a href="#">scaling_policy</a> object | Specifies details about the AS policy. For details, see <a href="#">Table 5-118</a> . |

**Table 5-118** `scaling_policy` field description

| Parameter           | Type                                    | Description  |
|---------------------|---|--|
| scaling_group_id    | String                                  | Specifies the AS group ID.   |
| scaling_policy_name | String                                  | Specifies the AS policy name.<br>Supports fuzzy search.  |
| scaling_policy_id   | String                                  | Specifies the AS policy ID.  |
| policy_status       | String                                  | Specifies the AS policy status. <ul style="list-style-type: none"> <li>• <b>INSERVICE</b>: The AS policy is enabled.</li> <li>• <b>PAUSED</b>: The AS policy is disabled.</li> <li>• <b>EXECUTING</b>: The AS policy is being executed.</li> </ul>   |
| scaling_policy_type | String                                  | Specifies the AS policy type. <ul style="list-style-type: none"> <li>• <b>ALARM</b>: indicates that the scaling action is triggered by an alarm. A value is returned for <b>alarm_id</b>, and no value is returned for <b>scheduled_policy</b>.</li> <li>• <b>SCHEDULED</b>: indicates that the scaling action is triggered as scheduled. A value is returned for <b>scheduled_policy</b>, and no value is returned for <b>alarm_id</b>, <b>recurrence_type</b>, <b>recurrence_value</b>, <b>start_time</b>, or <b>end_time</b>.</li> <li>• <b>RECURRENCE</b>: indicates that the scaling action is triggered periodically. Values are returned for <b>scheduled_policy</b>, <b>recurrence_type</b>, <b>recurrence_value</b>, <b>start_time</b>, and <b>end_time</b>, and no value is returned for <b>alarm_id</b>.</li> </ul> |
| alarm_id            | String                                  | Specifies the alarm ID.  |
| scheduled_policy    | <a href="#">scheduled_policy</a> object | Specifies the periodic or scheduled AS policy. For details, see <a href="#">Table 5-119</a> .  |

| Parameter             | Type                         | Description   |
|-----------------------|------------------------------|---|
| scaling_policy_action | scaling_policy_action object | Specifies the scaling action of the AS policy. For details, see <a href="#">Table 5-120</a> . |
| 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 5-119** 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. <ul style="list-style-type: none"> <li>If <b>scaling_policy_type</b> is set to <b>SCHEDULED</b>, the time format is <b>YYYY-MM-DDThh:mmZ</b>.</li> <li>If <b>scaling_policy_type</b> is set to <b>RECURRENCE</b>, the time format is <b>hh:mm</b>.</li> </ul>   |
| recurrence_type  | String | Specifies the type of a periodically triggered scaling action. <ul style="list-style-type: none"> <li><b>Daily</b>: indicates that the scaling action is triggered once a day.</li> <li><b>Weekly</b>: indicates that the scaling action is triggered once a week.</li> <li><b>Monthly</b>: indicates that the scaling action is triggered once a month.</li> </ul>   |
| recurrence_value | String | Specifies the frequency at which scaling actions are triggered. <ul style="list-style-type: none"> <li>If <b>recurrence_type</b> is set to <b>Daily</b>, the value is <b>null</b>, indicating that the scaling action is triggered once a day.</li> <li>If <b>recurrence_type</b> is set to <b>Weekly</b>, the value ranges from <b>1</b> (Sunday) to <b>7</b> (Saturday). The digits refer to dates in each week and separated by a comma, such as <b>1,3,5</b>.</li> <li>If <b>recurrence_type</b> is set to <b>Monthly</b>, the value ranges from <b>1</b> to <b>31</b>. The digits refer to the dates in each month and separated by a comma, such as <b>1,10,13,28</b>.</li> </ul> |

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

**Table 5-120 scaling\_policy\_action** field description

| Parameter           | Type    | Description   |
|---------------------|---------|---|
| operation           | String  | Specifies the scaling action. <ul style="list-style-type: none"> <li>● <b>ADD</b>: adds specified number of instances to the AS group.</li> <li>● <b>REMOVE</b>: removes specified number of instances from the AS group.</li> <li>● <b>SET</b>: sets the number of instances in the AS group.</li> </ul> |
| 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 5-121** 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 5-122** Response parameters

| Parameter      | Type                                  | Description   |
|----------------|---------------------------------------|---|
| scaling_policy | <a href="#">scaling_policy</a> object | Specifies details about the AS policy. For details, see <a href="#">Table 5-123</a> . |

**Table 5-123** `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. <ul style="list-style-type: none"> <li>AS group: <b>SCALING_GROUP</b></li> <li>Bandwidth: <b>BANDWIDTH</b></li> </ul>  |
| scaling_policy_name   | String                                       | Specifies the AS policy name.<br>Supports fuzzy search.   |
| scaling_policy_id     | String                                       | Specifies the AS policy ID.   |
| policy_status         | String                                       | Specifies the AS policy status. <ul style="list-style-type: none"> <li><b>INSERVICE</b>: The AS policy is enabled.</li> <li><b>PAUSED</b>: The AS policy is disabled.</li> <li><b>EXECUTING</b>: The AS policy is being executed.</li> </ul>  |
| scaling_policy_type   | String                                       | Specifies the AS policy type. <ul style="list-style-type: none"> <li><b>ALARM</b>: indicates that the scaling action is triggered by an alarm. A value is returned for <b>alarm_id</b>, and no value is returned for <b>scheduled_policy</b>.</li> <li><b>SCHEDULED</b>: indicates that the scaling action is triggered as scheduled. A value is returned for <b>scheduled_policy</b>, and no value is returned for <b>alarm_id</b>, <b>recurrence_type</b>, <b>recurrence_value</b>, <b>start_time</b>, or <b>end_time</b>.</li> <li><b>RECURRENCE</b>: indicates that the scaling action is triggered periodically. Values are returned for <b>scheduled_policy</b>, <b>recurrence_type</b>, <b>recurrence_value</b>, <b>start_time</b>, and <b>end_time</b>, and no value is returned for <b>alarm_id</b>.</li> <li><b>INTERVAL_ALARM</b>: indicates that the scaling action is triggered by a refined scaling policy. A value is returned for <b>alarm_id</b>, and no value is returned for <b>scheduled_policy</b>.</li> </ul> |
| alarm_id              | String                                       | Specifies the alarm ID.   |
| scheduled_policy      | <a href="#">scheduled_policy</a> object      | Specifies the periodic or scheduled AS policy. For details, see <a href="#">Table 5-124</a> .   |
| scaling_policy_action | <a href="#">scaling_policy_action</a> object | Specifies the scaling action of the AS policy. For details, see <a href="#">Table 5-125</a> .   |
| cool_down_time        | Integer                                      | Specifies the cooldown period (s).  |

| Parameter   | Type                             | Description  |
|-------------|----------------------------------|--|
| create_time | String                           | Specifies the time when an AS policy was created. The time format complies with UTC. |
| meta_data   | <a href="#">meta_data</a> object | Provides additional information. For details, see <a href="#">Table 5-126</a> .      |
| description | String                           | Specifies the AS policy description.   |

**Table 5-124** `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. <ul style="list-style-type: none"> <li>If <b>scaling_policy_type</b> is set to <b>SCHEDULED</b>, the time format is <b>YYYY-MM-DDThh:mmZ</b>.</li> <li>If <b>scaling_policy_type</b> is set to <b>RECURRENT</b>, the time format is <b>hh:mm</b>.</li> </ul>  |
| recurrence_type  | String | Specifies the type of a periodically triggered scaling action. <ul style="list-style-type: none"> <li><b>Daily</b>: indicates that the scaling action is triggered once a day.</li> <li><b>Weekly</b>: indicates that the scaling action is triggered once a week.</li> <li><b>Monthly</b>: indicates that the scaling action is triggered once a month.</li> </ul>   |
| recurrence_value | String | Specifies the frequency at which scaling actions are triggered. <ul style="list-style-type: none"> <li>If <b>recurrence_type</b> is set to <b>Daily</b>, the value is <b>null</b>, indicating that the scaling action is triggered once a day.</li> <li>If <b>recurrence_type</b> is set to <b>Weekly</b>, the value ranges from <b>1</b> (Sunday) to <b>7</b> (Saturday). The digits refer to dates in each week and separated by a comma, such as <b>1,3,5</b>.</li> <li>If <b>recurrence_type</b> is set to <b>Monthly</b>, the value ranges from <b>1</b> to <b>31</b>. The digits refer to the dates in each month and separated by a comma, such as <b>1,10,13,28</b>.</li> </ul> |

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

**Table 5-125 scaling\_policy\_action** field description

| Parameter  | Type    | Description  |
|------------|---------|--|
| operation  | String  | Specifies the scaling action. <ul style="list-style-type: none"> <li>• <b>ADD</b>: indicates adding instances.</li> <li>• <b>REDUCE</b>: indicates reducing instances.</li> <li>• <b>SET</b>: indicates setting the number of instances to a specified value.</li> </ul> |
| size       | Integer | Specifies the operation size.  |
| percentage | Integer | Specifies the percentage of instances to be operated.  |
| limits     | Integer | Specifies the operation restrictions.  |

**Table 5-126 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

```
{
  "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": "al1513822380493GvJKZwA8",
"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.      |

| 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](#).

### 5.4.10 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 | <p>Specifies the operation for an AS policy.</p> <ul style="list-style-type: none"> <li>• <b>execute</b>: immediately executes the AS policy.</li> <li>• <b>resume</b>: enables the AS group.</li> <li>• <b>pause</b>: disables the AS group.</li> </ul> |

## 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](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.                          |

| 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](#).

### 5.4.11 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.      |

| 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](#).

## 5.4.12 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. |

| Parameter    | Mandatory | Type   | Description  |
|--------------|-----------|--------|--|
| action       | Yes       | String | Specifies an action to be performed on AS policies in batches. The options are as follows: <ul style="list-style-type: none"><li>• <b>delete</b>: deletes AS policies.</li><li>• <b>resume</b>: enables AS policies.</li><li>• <b>pause</b>: disables AS policies.</li></ul>   |
| force_delete | No        | String | Specifies whether to forcibly delete an AS policy. If the value is set to <b>no</b> , in-progress AS policies cannot be deleted. Options: <ul style="list-style-type: none"><li>• <b>no</b> (default): indicates that the AS policy is not forcibly deleted.</li><li>• <b>yes</b>: indicates that the AS policy is forcibly deleted.</li></ul> This parameter is available only when <b>action</b> is set to <b>delete</b> . |
| delete_alarm | No        | String | Specifies whether to delete the alarm rule used by the alarm policy. The value can be <b>yes</b> or <b>no</b> (default). This parameter is available only when <b>action</b> is set to <b>delete</b> .   |

## 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.                       |
| 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.  |
| log_id                | No        | String | Specifies the ID of an AS policy execution log.  |
| scaling_resource_type | No        | String | Specifies the scaling resource type. <ul style="list-style-type: none"> <li>• AS group: <b>SCALING_GROUP</b></li> <li>• Bandwidth: <b>BANDWIDTH</b></li> </ul> |
| scaling_resource_id   | No        | String | Specifies the scaling resource ID.   |

| Parameter    | Mandatory | Type    | Description  |
|--------------|-----------|---------|--|
| execute_type | No        | String  | Specifies the AS policy execution type. <ul style="list-style-type: none"> <li>• <b>SCHEDULED</b>: automatically triggered at a specified time point</li> <li>• <b>RECURRENCE</b>: automatically triggered at a specified time period</li> <li>• <b>ALARM</b>: alarm-triggered</li> <li>• <b>MANUAL</b>: manually triggered</li> <li>• <b>INTERVAL_ALARM</b>: automatically triggered by a refined scaling policy</li> </ul> |
| 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 <b>yyyy-MM-ddThh:mm:ssZ</b> .   |
| 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 <b>yyyy-MM-ddThh:mm:ssZ</b> .   |
| start_number | No        | Integer | Specifies the start line number. The default value is <b>0</b> . The minimum parameter value is <b>0</b> .   |
| limit        | No        | Integer | Specifies the number of query records. The default value is <b>20</b> . 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 <a href="#">scaling_policy_execute_log</a> objects | Specifies the AS policy execution logs. For details, see <a href="#">Table 5-134</a> . |

**Table 5-134** `scaling_policy_execute_log` field description

| Parameter         | Type   | Description  |
|-------------------|--------|--|
| status            | String | Specifies the AS policy execution status. <ul style="list-style-type: none"> <li>• <b>SUCCESS</b>: The AS policy has been executed.</li> <li>• <b>FAIL</b>: Executing the AS policy failed.</li> <li>• <b>EXECUTING</b>: The AS policy is being executed.</li> </ul>   |
| failed_reason     | String | Specifies the AS policy execution failure.   |
| execute_type      | String | Specifies the AS policy execution type. <ul style="list-style-type: none"> <li>• <b>SCHEDULED</b>: automatically triggered at a specified time point</li> <li>• <b>RECURRENCE</b>: automatically triggered at a specified time period</li> <li>• <b>ALARM</b>: alarm-triggered</li> <li>• <b>MANUAL</b>: manually triggered</li> <li>• <b>INTERVAL_ALARM</b>: automatically triggered by a refined scaling policy</li> </ul> |
| 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.  |
| tenant_id         | String | Specifies the project ID.  |
| scaling_policy_id | String | Specifies the AS policy ID.  |

| Parameter             | Type                                | Description   |
|-----------------------|-------------------------------------|---|
| scaling_resource_type | String                              | Specifies the scaling resource type. <ul style="list-style-type: none"> <li>AS group: <b>SCALING_GROUP</b></li> <li>Bandwidth: <b>BANDWIDTH</b></li> </ul>  |
| 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.<br>If <b>scaling_resource_type</b> is set to <b>BANDWIDTH</b> and <b>operation</b> is not <b>SET</b> , this parameter takes effect and the unit is Mbit/s.<br>In this case: <ul style="list-style-type: none"> <li>If <b>operation</b> is set to <b>ADD</b>, this parameter indicates the maximum bandwidth allowed.</li> <li>If <b>operation</b> is set to <b>REDUCE</b>, this parameter indicates the minimum bandwidth allowed.</li> </ul> |
| type                  | String                              | Specifies the AS policy execution type. <ul style="list-style-type: none"> <li><b>ADD</b>: indicates adding instances.</li> <li><b>REMOVE</b>: indicates reducing instances.</li> <li><b>SET</b>: indicates setting the number of instances to a specified value.</li> </ul>  |
| job_records           | Array of <b>job_records</b> objects | Specifies the tasks contained in a scaling action based on an AS policy. For details, see <a href="#">Table 5-135</a> .   |
| meta_data             | <b>meta_data</b> object             | Provides additional information. For details, see <a href="#">Table 5-136</a> .   |

**Table 5-135 job\_records** field description

| Parameter   | Type   | Description   |
|-------------|--------|---|
| job_name    | String | Specifies the task name.  |
| record_type | String | Specifies the record type. <ul style="list-style-type: none"> <li><b>API</b>: API calling type</li> <li><b>MEG</b>: message type</li> </ul> |
| record_time | String | Specifies the record time.  |
| request     | String | Specifies the request body. This parameter is valid only if <b>record_type</b> is set to <b>API</b> .                                       |

| Parameter  | Type   | Description  |
|------------|--------|--|
| response   | String | Specifies the response body. This parameter is valid only if <b>record_type</b> is set to <b>API</b> .   |
| code       | String | Specifies the returned code. This parameter is valid only if <b>record_type</b> is set to <b>API</b> .   |
| message    | String | Specifies the message. This parameter is valid only if <b>record_type</b> is set to <b>MEG</b> .   |
| job_status | String | Specifies the execution status of the task. <ul style="list-style-type: none"> <li>• <b>SUCCESS</b>: The task is successfully executed.</li> <li>• <b>FAIL</b>: The task failed to be executed.</li> </ul> |

**Table 5-136 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,
  "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-514b68eccc7",
      "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": "RECURRENT",
      "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 <b>yyyy-MM-ddThh:mm:ssZ</b> . |
| end_time         | No        | String  | Specifies the end time that complies with UTC for querying scaling action logs. The format of the end time is <b>yyyy-MM-ddThh:mm:ssZ</b> .     |
| start_number     | No        | Integer | Specifies the start line number. The default value is <b>0</b> . The minimum parameter value is <b>0</b> .                                      |
| limit            | No        | Integer | Specifies the number of query records. The default value is <b>20</b> . 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 <a href="#">Table 5-139</a> . |

**Table 5-139** scaling\_activity\_log field description

| Parameter  | Type   | Description  |
|------------|--------|--|
| status     | String | Specifies the status of the scaling action. <ul style="list-style-type: none"><li>● <b>SUCCESS</b>: The scaling action has been performed.</li><li>● <b>FAIL</b>: Performing the scaling action failed.</li><li>● <b>DOING</b>: The scaling action is being performed.</li></ul> |
| 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 | 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\": \"RECURRENT\", \"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.                       |
| 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.   |
| 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 <b>yyyy-MM-ddThh:mm:ssZ</b> . |
| end_time         | No        | String  | Specifies the end time that complies with UTC for querying scaling action logs. The format of the end time is <b>yyyy-MM-ddThh:mm:ssZ</b> .     |
| start_number     | No        | Integer | Specifies the start line number. The default value is <b>0</b> . The minimum parameter value is <b>0</b> .                                      |

| Parameter | Mandatory | Type    | Description   |
|-----------|-----------|---------|---|
| limit     | No        | Integer | Specifies the number of query records. The default value is <b>20</b> . The value ranges from 0 to 100.   |
| type      | No        | String  | <p>Specifies the types of the scaling actions to be queried. Different types are separated by commas (,).</p> <ul style="list-style-type: none"> <li>• <b>NORMAL</b>: indicates a common scaling action.</li> <li>• <b>MANUAL_REMOVE</b>: indicates manually removing instances from an AS group.</li> <li>• <b>MANUAL_DELETE</b>: indicates manually removing and deleting instances from an AS group.</li> <li>• <b>MANUAL_ADD</b>: indicates manually adding instances to an AS group.</li> <li>• <b>ELB_CHECK_DELETE</b>: indicates that instances are removed from an AS group and deleted based on the ELB health check result.</li> <li>• <b>AUDIT_CHECK_DELETE</b>: indicates that instances are removed from an AS group and deleted based on the audit.</li> <li>• <b>DIFF</b>: indicates that the number of expected instances is different from the actual number of instances.</li> <li>• <b>MODIFY_ELB</b>: indicates the load balancer migration.</li> <li>• <b>ENTER_STANDBY</b>: indicates setting instances to standby mode.</li> <li>• <b>EXIT_STANDBY</b>: indicates canceling standby mode for instances.</li> </ul> |

| Parameter | Mandatory | Type   | Description  |
|-----------|-----------|--------|--|
| status    | No        | String | Specifies the status of the scaling action. <ul style="list-style-type: none"> <li>• <b>SUCCESS:</b> The scaling action has been performed.</li> <li>• <b>FAIL:</b> Performing the scaling action failed.</li> <li>• <b>DOING:</b> The scaling action is being performed.</li> </ul> |

## 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 <a href="#">scaling_activity_log</a> objects | Specifies scaling action logs. For details, see <a href="#">Table 5-142</a> . |

**Table 5-142 scaling\_activity\_log** field description

| Parameter             | Type  | Description  |
|-----------------------|---|--|
| status                | String  | Specifies the status of the scaling action. <ul style="list-style-type: none"> <li>• <b>SUCCESS</b>: The scaling action has been performed.</li> <li>• <b>FAIL</b>: Performing the scaling action failed.</li> <li>• <b>DOING</b>: The scaling action is being performed.</li> </ul> |
| 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 | Array of <a href="#">scaling_instance</a> objects | Specifies names of the ECSs that are removed from the AS group in a scaling action. For details, see <a href="#">Table 5-143</a> .   |
| instance_deleted_list | Array of <a href="#">scaling_instance</a> objects | Specifies names of the ECSs that are removed from the AS group and deleted in a scaling action. For details, see <a href="#">Table 5-143</a> .   |
| instance_added_list   | Array of <a href="#">scaling_instance</a> objects | Specifies names of the ECSs that are added to the AS group in a scaling action. For details, see <a href="#">Table 5-143</a> .   |
| instance_failed_list  | Array of <a href="#">scaling_instance</a> objects | Specifies the ECSs for which a scaling action fails. For details, see <a href="#">Table 5-143</a> .  |
| instance_standby_list | Array of <a href="#">scaling_instance</a> objects | Specifies the ECSs that are set to standby mode or for which standby mode is canceled in a scaling action. For details, see <a href="#">Table 5-143</a> .  |
| 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.   |

| Parameter              | Type                                       | Description  |
|------------------------|--|--|
| desire_value           | Integer                                    | Specifies the expected number of instances for the scaling action.   |
| lb_bind_success_list   | Array of <a href="#">modify_lb</a> objects | Specifies the load balancers that are bound to the AS group. For details, see <a href="#">Table 5-144</a> .              |
| lb_bind_failed_list    | Array of <a href="#">modify_lb</a> objects | Specifies the load balancers that failed to be bound to the AS group. For details, see <a href="#">Table 5-144</a> .     |
| lb_unbind_success_list | Array of <a href="#">modify_lb</a> objects | Specifies the load balancers that are unbound from the AS group. For details, see <a href="#">Table 5-144</a> .          |
| lb_unbind_failed_list  | Array of <a href="#">modify_lb</a> objects | Specifies the load balancers that failed to be unbound from the AS group. For details, see <a href="#">Table 5-144</a> . |
| 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 | <a href="#">lbaas_listener</a> object | Specifies information about an enhanced load balancer. For details, see <a href="#">Table 5-145</a> . |
| listener       | String                                | Specifies information about a classic load balancer.  |
| failed_reason  | String                                | Specifies the cause of a load balancer migration failure.   |

| Parameter      | Type   | Description   |
|----------------|--------|---|
| 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.                     |
| 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    | <a href="#">quotas</a> object | Specifies quota details. For details, see <a href="#">Table 5-148</a> . |

**Table 5-148 quotas** field description

| Parameter | Type                                       | Description   |
|-----------|--|---|
| resources | Array of <a href="#">resources</a> objects | Specifies resources. For details, see <a href="#">Table 5-149</a> . |

**Table 5-149 resources** field description

| Parameter | Type    | Description  |
|-----------|---------|--|
| type      | String  | Specifies the quota type. <ul style="list-style-type: none"> <li>• <b>scaling_Group</b>: AS group quota</li> <li>• <b>scaling_Config</b>: AS configuration quota</li> <li>• <b>scaling_Policy</b>: AS policy quota</li> <li>• <b>scaling_Instance</b>: instance quota</li> <li>• <b>bandwidth_scaling_policy</b>: bandwidth scaling policy quota.</li> </ul>                     |
| used      | Integer | Specifies the used amount of the quota.<br>When <b>type</b> is set to <b>scaling_Policy</b> or <b>scaling_Instance</b> , this parameter is reserved, and the system returns <b>-1</b> as the parameter value.<br>You can query the used quota of AS policies and AS instances in a specified AS group. For details, see <a href="#">Querying AS Policy and Instance Quotas</a> . |
| 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_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.      |

| 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](#).

## 5.7.2 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    | <a href="#">quotas</a> object | Specifies quota details. For details, see <a href="#">Table 5-152</a> . |

**Table 5-152** [quotas](#) field description

| Parameter | Type                                       | Description   |
|-----------|--|---|
| resources | Array of <a href="#">resources</a> objects | Specifies resources. For details, see <a href="#">Table 5-153</a> . |

**Table 5-153** [resources](#) field description

| Parameter | Type    | Description  |
|-----------|---------|--|
| type      | String  | Specifies the quota type. <ul style="list-style-type: none"> <li><b>scaling_Policy</b>: indicates AS policies.</li> <li><b>scaling_Instance</b>: indicates instances.</li> </ul> |
| 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.  |
| 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. |



| Parameter   | Mandatory | Type             | Description  |
|-------------|-----------|------------------|--|
| topic_scene | Yes       | Array of strings | <p>Specifies a notification scenario, which can be one of the following:</p> <ul style="list-style-type: none"> <li>• <b>SCALING_UP</b>: indicates that the capacity is expanded.</li> <li>• <b>SCALING_UP_FAIL</b>: indicates that the capacity expansion failed.</li> <li>• <b>SCALING_DOWN</b>: indicates that the capacity is reduced.</li> <li>• <b>SCALING_DOWN_FAIL</b>: indicates that the capacity reduction failed.</li> <li>• <b>SCALING_GROUP_ABNORMAL</b>: indicates that an exception has occurred in the AS group.</li> </ul> |

## 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](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_ABNORMAL"
  ]
}
```

## Response

**Table 5-156** Response parameters

| Parameter | Type   | Description                      |
|-----------|--------|----------------------------------|
| topic_urn | String | Specifies a unique topic in SMN. |

| Parameter   | Type             | Description   |
|-------------|------------------|---|
| topic_scene | Array of strings | Specifies a notification scenario, which can be one of the following: <ul style="list-style-type: none"> <li>• <b>SCALING_UP</b>: indicates that the capacity is expanded.</li> <li>• <b>SCALING_UP_FAIL</b>: indicates that the capacity expansion failed.</li> <li>• <b>SCALING_DOWN</b>: indicates that the capacity is reduced.</li> <li>• <b>SCALING_DOWN_FAIL</b>: indicates that the capacity reduction failed.</li> <li>• <b>SCALING_GROUP_ABNORMAL</b>: indicates that an exception has occurred in the AS group.</li> </ul> |
| 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_ABNORMAL"
  ],
  "topic_name": "gsh"
}
```

### 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](#).

## 5.8.2 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 <b>topics</b> 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: <ul style="list-style-type: none"><li>• <b>SCALING_UP</b>: indicates that the capacity is expanded.</li><li>• <b>SCALING_UP_FAIL</b>: indicates that the capacity expansion failed.</li><li>• <b>SCALING_DOWN</b>: indicates that the capacity is reduced.</li><li>• <b>SCALING_DOWN_FAIL</b>: indicates that the capacity reduction failed.</li><li>• <b>SCALING_GROUP_ABNORMAL</b>: indicates that an exception has occurred in the AS group.</li></ul> |
| 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_ABNORMAL"
      ]
    }
  ]
}
```

```

"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.                                      |
| 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 delete 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.                          |
| 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 performs a scaling action, the lifecycle hook suspends the target instance and sets it to be in **Wait (Adding to AS group)** or **Wait (Removing from AS group)** status. This status retains until the timeout duration expires or you manually call back this status.
- 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: <ul style="list-style-type: none"><li>• <b>INSTANCE_TERMINATING:</b> The hook suspends the instance when the instance is terminated.</li><li>• <b>INSTANCE_LAUNCHING:</b> The hook suspends the instance when the instance is started.</li></ul> |



| Parameter       | Mandatory | Type    | Description   |
|-----------------|-----------|---------|---|
| default_result  | No        | String  | <p>Specifies the default lifecycle hook callback operation. By default, this operation is performed when the timeout duration expires.</p> <ul style="list-style-type: none"><li>• ABANDON</li><li>• CONTINUE</li></ul> <p><b>NOTE</b></p> <ul style="list-style-type: none"><li>• If an instance is starting, <b>CONTINUE</b> indicates that your customized operations are successful and the instance can be used. <b>ABANDON</b> 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.</li><li>• If an instance is stopping, both <b>ABANDON</b> and <b>CONTINUE</b> allow instance termination. The difference between the two states is as follows: <b>ABANDON</b> stops other lifecycle hooks, but <b>CONTINUE</b> allows the completion of other lifecycle hooks.</li><li>• The default value of this parameter is <b>ABANDON</b>.</li></ul> |
| default_timeout | No        | Integer | <p>Specifies the lifecycle hook timeout duration, which ranges from 60 to 86400 in the unit of second. The default value is 3600.</p> <p>By default, this parameter specifies the instance waiting duration. You can prolong the timeout duration or perform the <b>CONTINUE</b> or <b>ABANDON</b> operation before the timeout duration expires.</p>   |

| Parameter              | Mandatory | Type   | Description   |
|------------------------|-----------|--------|---|
| notification_topic_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: <>&'()<br>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. |

| Parameter               | Type    | Description  |
|-------------------------|---------|--|
| lifecycle_hook_type     | String  | Specifies the lifecycle hook type. <ul style="list-style-type: none"><li>• INSTANCE_TERMINATING</li><li>• INSTANCE_LAUNCHING</li></ul> |
| default_result          | String  | Specifies the default lifecycle hook callback operation. <ul style="list-style-type: none"><li>• ABANDON</li><li>• CONTINUE</li></ul>  |
| 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.                        |

| 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](#).

## 5.9.2 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. |

| Parameter        | Mandatory | Type   | Description                |
|------------------|-----------|--------|----------------------------|
| 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 <a href="#">lifecycle_hooks</a> objects | Specifies lifecycle hooks. For details, see <a href="#">Table 5-166</a> . |

**Table 5-166** lifecycle\_hooks field description

| Parameter              | Type    | Description  |
|------------------------|---------|--|
| lifecycle_hook_name    | String  | Specifies the lifecycle hook name.   |
| lifecycle_hook_type    | String  | Specifies the lifecycle hook type. <ul style="list-style-type: none"><li>INSTANCE_TERMINATING</li><li>INSTANCE_LAUNCHING</li></ul> |
| default_result         | String  | Specifies the default lifecycle hook callback operation. <ul style="list-style-type: none"><li>ABANDON</li><li>CONTINUE</li></ul>  |
| default_timeout        | Integer | Specifies the lifecycle hook timeout duration in the unit of second.   |
| notification_topic_urn | String  | Specifies a unique topic in SMN.   |

| Parameter               | Type   | Description   |
|-------------------------|--------|---|
| 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. |
| 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](#).

### 5.9.3 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. |

| Parameter           | Mandatory | Type   | Description                        |
|---------------------|-----------|--------|------------------------------------|
| 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. <ul style="list-style-type: none"> <li>INSTANCE_TERMINATING</li> <li>INSTANCE_LAUNCHING</li> </ul> |
| default_result          | String  | Specifies the default lifecycle hook callback operation. <ul style="list-style-type: none"> <li>ABANDON</li> <li>CONTINUE</li> </ul>  |
| 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.  |
| 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](#).

## 5.9.4 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.<br>Options: <ul style="list-style-type: none"><li>• <b>INSTANCE_TERMINATING</b>: The hook suspends the instance when the instance is terminated.</li><li>• <b>INSTANCE_LAUNCHING</b>: The hook suspends the instance when the instance is started.</li></ul> |

| Parameter              | Mandatory | Type    | Description  |
|------------------------|-----------|---------|--|
| default_result         | No        | String  | <p>Specifies the default lifecycle hook callback operation. By default, this operation is performed when the timeout duration expires.</p> <ul style="list-style-type: none"> <li>• ABANDON</li> <li>• CONTINUE</li> </ul> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• If an instance is starting, <b>CONTINUE</b> indicates that your customized operations are successful and the instance can be used. <b>ABANDON</b> 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.</li> <li>• If an instance is stopping, both <b>ABANDON</b> and <b>CONTINUE</b> allow instance termination. The difference between the two states is as follows: <b>ABANDON</b> stops other lifecycle hooks, but <b>CONTINUE</b> allows the completion of other lifecycle hooks.</li> <li>• The default value of this parameter is <b>ABANDON</b>.</li> </ul> |
| default_timeout        | No        | Integer | <p>Specifies the lifecycle hook timeout duration, which ranges from 60 to 86400 in the unit of second. The default value is 3600.</p> <p>By default, this parameter specifies the instance waiting duration. You can prolong the timeout duration or perform the <b>CONTINUE</b> or <b>ABANDON</b> operation before the timeout duration expires.</p>  |
| notification_topic_urn | No        | String  | <p>Specifies a unique topic in SMN.</p> <p>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.</p>  |

| Parameter             | Mandatory | Type   | Description  |
|-----------------------|-----------|--------|--|
| notification_metadata | No        | String | Specifies a customized notification, which contains no more than 256 characters in length. The message cannot contain the following characters: <>&'()<br><br>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](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. <ul style="list-style-type: none"> <li>INSTANCE_TERMINATING</li> <li>INSTANCE_LAUNCHING</li> </ul> |
| default_result          | String  | Specifies the default lifecycle hook callback operation. <ul style="list-style-type: none"> <li>ABANDON</li> <li>CONTINUE</li> </ul>  |
| 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:region/db53e5554fad0494d96206fb84296510b: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](#).

## 5.9.5 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 <a href="#">querying instance suspension</a> .<br>When specifying a lifecycle callback object, this field is mandatory if the <b>instance_id</b> parameter is not used. If both this parameter and the <b>instance_id</b> parameter are used, preferentially use this parameter for callback. |
| instance_id             | No        | String | Specifies the instance ID.<br>When a lifecycle callback object is specified, this parameter is mandatory if the <b>lifecycle_action_key</b> parameter is not used.  |
| lifecycle_hook_name     | No        | String | Specifies the lifecycle hook name.<br>When a lifecycle callback object is specified, this parameter is mandatory if the <b>lifecycle_action_key</b> parameter is not used.  |
| lifecycle_action_result | Yes       | String | Specifies the lifecycle callback action. <ul style="list-style-type: none"><li>● <b>ABANDON</b>: terminates the instance.</li><li>● <b>CONTINUE</b>: continues the instance.</li><li>● <b>EXTEND</b>: extends the timeout duration, one hour each time.</li></ul>   |

### 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.                            |
| 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 <a href="#">instance_hanging_info</a> 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.  |
| lifecycle_hook_status | String | Specifies the lifecycle hook status. <ul style="list-style-type: none"><li>• <b>HANGING</b>: suspends the instance.</li><li>• <b>CONTINUE</b>: continues the instance.</li><li>• <b>ABANDON</b>: terminates the instance.</li></ul> |
| 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.                  |
| 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.                                      |
| 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:<br><b>scaling_group_tag</b> : 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 <b>tags</b> 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.                     |

| Returned Value            | Description  |
|---------------------------|--|
| 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_type | Yes       | String | Specifies the resource type. The option is as follows:<br><b>scaling_group_tag</b> : 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 <a href="#">ResourceTag</a> objects | Specifies tags. For details, see <a href="#">Table 5-183</a> .        |
| sys_tags  | Array of <a href="#">ResourceTag</a> objects | Specifies system tags. For details, see <a href="#">Table 5-183</a> . |

**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.   |
| 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:<br><b>scaling_group_tag</b> : 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 <a href="#">ResourceTag</a> objects | Specifies the tag list. For details, see <a href="#">Table 5-186</a> .<br>If <b>action</b> is set to <b>delete</b> , 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: <ul style="list-style-type: none"> <li><b>delete</b>: indicates deleting a tag.</li> <li><b>create</b>: indicates creating a tag. If the same key value already exists, it will be overwritten.</li> </ul> |

**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.<br>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.<br>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.                   |
| 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 <b>scaling_group_tag</b> . |

### Request

**Table 5-188** Request parameters

| Parameter    | Mandatory | Type                        | Description  |
|--------------|-----------|-----------------------------|--|
| tags         | No        | Array of <b>Tag</b> objects | Specifies filter criteria with tags included. A maximum of 10 keys can be contained. The structure body must be complete. For details, see <a href="#">Table 5-189</a> . |
| tags_any     | No        | Array of <b>Tag</b> objects | Specifies filter criteria with any tag included. A maximum of 10 keys can be contained. For details, see <a href="#">Table 5-189</a> .                                   |
| not_tags     | No        | Array of <b>Tag</b> objects | Specifies filter criteria without tags included. A maximum of 10 keys can be contained. For details, see <a href="#">Table 5-189</a> .                                   |
| not_tags_any | No        | Array of <b>Tag</b> objects | Specifies filter criteria without any tag included. A maximum of 10 keys can be contained. For details, see <a href="#">Table 5-189</a> .                                |

| Parameter | Mandatory | Type                          | Description   |
|-----------|-----------|-------------------------------|---|
| limit     | No        | String                        | <p>Specifies the maximum number of query records. The maximum value is 1,000, and the minimum value is 1.</p> <ul style="list-style-type: none"> <li>• If <b>action</b> is set to <b>count</b>, this parameter is invalid.</li> <li>• If <b>action</b> is set to <b>filter</b>, the default value is <b>1000</b>.</li> </ul>  |
| marker    | No        | String                        | <p>Marks the paging location (index position). You are advised to use the <b>offset</b> parameter to set the index position.</p> <p>Marks the paging location (resource ID or index location).</p>  |
| action    | Yes       | String                        | <p>Specifies the operation, which can be <b>filter</b> or <b>count</b>.</p> <ul style="list-style-type: none"> <li>• <b>filter</b>: indicates that resources are filtered by tag and the resources meeting the search criteria are returned on pages.</li> <li>• <b>count</b>: indicates that resources are searched by tag and the number of resources meeting the search criteria is returned.</li> </ul>   |
| offset    | No        | String                        | <p>Specifies the index position. The query starts from the next image indexed by this parameter. The value must be a non-negative number.</p> <p>You do not need to specify this parameter when querying resources on the first page. When you query resources on subsequent pages, set <b>offset</b> to the location returned in the response body for the previous query.</p> <ul style="list-style-type: none"> <li>• If the <b>action</b> value is <b>count</b>, this parameter is invalid.</li> <li>• If the <b>action</b> value is <b>filter</b>, the default value is <b>0</b>.</li> </ul> |
| matches   | No        | Array of <b>match</b> objects | <p>Specifies fuzzy search. For details, see <a href="#">Table 5-190</a>.</p>  |

**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.  |
| 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. <ul style="list-style-type: none"> <li>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 (*).</li> <li>If the values are null (not default), it indicates <b>any_value</b> (querying any value). The resources contain one or multiple values listed in <b>values</b> will be found and displayed.</li> </ul> |

**Table 5-190 match** field description

| Parameter | Mandatory | Type   | Description  |
|-----------|-----------|--------|--|
| key       | Yes       | String | Specifies the key based on which to query resources.<br>The parameter value can only be <b>resource_name</b> . |



| Parameter | Mandatory | Type   | Description  |
|-----------|-----------|--------|--|
| 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 <b>resource_id</b> , exact match is used. |

## Example Request

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

POST [https://{{Endpoint}}/autoscaling-api/v1/{project\\_id}/scaling\\_group\\_tag/resource\\_instances/action](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 shows how to query the number of AS groups for a tenant using the following search criteria: including the tag (key = **key1** and value = **value**) and excluding the tag (key = **key2** and value = **value2**).

POST [https://{{Endpoint}}/autoscaling-api/v1/{project\\_id}/scaling\\_group\\_tag/resource\\_instances/action](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"]
  }],
  {
    "key": "key2",
    "values": ["value1",
    "value2"]
  }],
  "matches": [{
    "key": "resource_name",
    "value": "resource1"
  }]
}
```

## Response

**Table 5-191** Response parameters

| Parameter   | Type                                      | Description  |
|-------------|---|--|
| resources   | Array of <a href="#">Resource</a> objects | Specifies tag resources. For details, see <a href="#">Table 5-192</a> .  |
| total_count | Integer                                   | Specifies the total number of records. When <b>action</b> is set to <b>count</b> , only this parameter is returned. The values of <b>resources</b> and <b>marker</b> 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.  |
| resource_detail | String                                       | Specifies the resource details.   |
| tags            | Array of <a href="#">ResourceTag</a> objects | Specifies tags. If there is no tag, the field <b>tags</b> is taken as an empty array by default. For details, see <a href="#">Table 5-193</a> . |
| 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. |

| Returned Value          | 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](#).

# 5.11 Planned Tasks

## 5.11.1 Creating a Planned Task

### Function

This API is used to create a planned task for an AS group.

### URI

POST /autoscaling-api/v1/{project\_id}/scaling-groups/{scaling\_group\_id}/scheduled-tasks

**Table 5-194** 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 5-195** Request parameters

| Parameter        | Mandatory | Type   | Description   |
|------------------|-----------|--------|---|
| name             | Yes       | String | Specifies the planned task name.  |
| scheduled_policy | Yes       | Object | Specifies the planned task policy. For details, see <a href="#">Table 5-196</a> . |

| Parameter       | Mandatory | Type   | Description  |
|-----------------|-----------|--------|--|
| instance_number | Yes       | Object | Specifies the instance number settings of the AS group. For details, see <a href="#">Table 5-197</a> . |

**Table 5-196** `scheduled_policy` field description

| Parameter       | Mandatory | Type   | Description  |
|-----------------|-----------|--------|--|
| start_time      | No        | String | Specifies the time when the valid period of the planned task starts. This parameter is valid only when <b>recurrence_type</b> is specified. The format is yyyy-MM-dd'T'HH:mm'Z'. If this parameter is left empty, the time when the task is successfully created is used by default. |
| end_time        | No        | String | Specifies the time when the valid period of the planned task ends. This parameter is valid and mandatory only if <b>recurrence_type</b> is specified. The format is yyyy-MM-dd'T'HH:mm'Z'.   |
| launch_time     | Yes       | String | Specifies the time when the planned task is executed. The UTC time is used. If <b>recurrence_type</b> is left empty or null, the format of the execution time is yyyy-MM-dd'T'HH:mm'Z'. If <b>recurrence_type</b> is specified, the format of the execution time is HH:mm.           |
| recurrence_type | No        | String | If this parameter is left blank or null, the planned task is executed at a specified time point. If this parameter is set to <b>DAILY</b> , <b>WEEKLY</b> , or <b>MONTHLY</b> , the planned task is executed periodically by day, week, or month.                                    |

| Parameter        | Mandatory | Type   | Description  |
|------------------|-----------|--------|--|
| recurrence_value | No        | String | This parameter is mandatory only if <b>recurrence_type</b> is set to <b>WEEKLY</b> or <b>MONTHLY</b> . Multiple dates are separated by commas (,). When <b>recurrence_type</b> is set to <b>WEEKLY</b> , the value ranges from 1 to 7. If <b>recurrence_type</b> is set to <b>MONTHLY</b> , the value ranges from 1 to 31. |

Table 5-197 instance\_number field description

| Parameter | Mandatory | Type    | Description   |
|-----------|-----------|---------|---|
| max       | No        | Integer | Specifies the maximum number of instances in the AS group.  |
| min       | No        | Integer | Specifies the minimum number of instances in the AS group.  |
| desire    | No        | Integer | Specifies the expected number of instances in the AS group. |

## Example Request

This example creates a task scheduled to run at 17:00 every day for AS group **5bc3aa02-b83e-454c-aba1-4d2095c68f8b**. The action is to set the maximum number of instances to **10** and the minimum number of instances to **5**.

POST https://{Endpoint}/v1/{project\_id}/scaling-groups/5bc3aa02-b83e-454c-aba1-4d2095c68f8b/scheduled-tasks

```
{
  "name": "as-scheduled-task-7a75",
  "scheduled_policy": {
    "start_time": "2015-12-14T03:34Z",
    "end_time": "2033-12-27T03:34Z",
    "launch_time": "17:00",
    "recurrence_type": "Daily"
  },
  "instance_number": {
    "max": 10,
    "min": 5
  }
}
```

## Response

**Table 5-198** Response parameters

| Parameter | Mandatory | Type   | Description                    |
|-----------|-----------|--------|--------------------------------|
| task_id   | No        | String | Specifies the planned task ID. |

## Example Response

```
{  
  "task_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. Then, the request can be processed.      |
| 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. |

| Returned Value          | Description   |
|-------------------------|---|
| 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](#).

## 5.11.2 Querying Planned Tasks

### Function

This API is used to query the planned tasks of an AS group.

### URI

GET /autoscaling-api/v1/{project\_id}/scaling-groups/{scaling\_group\_id}/scheduled-tasks

**Table 5-199** Parameter description

| Parameter        | Mandatory | Type    | Description                                |
|------------------|-----------|---------|--|
| project_id       | Yes       | String  | Specifies the project ID.                  |
| scaling_group_id | Yes       | String  | Specifies the AS group ID.                 |
| limit            | No        | Integer | Specifies the number of records to query.  |
| marker           | No        | String  | Specifies the marker for pagination query. |

### Request

None

### Example Request

This example queries the planned tasks of an AS group.

GET https://{Endpoint}/v1/{project\_id}/scaling-groups/{scaling\_group\_id}/scheduled-tasks



## Response

**Table 5-200** Response parameters

| Parameter       | Mandatory | Type             | Description  |
|-----------------|-----------|------------------|--|
| page_info       | No        | Object           | Specifies the pagination information. For details, see <a href="#">Table 5-201</a> . |
| scheduled_tasks | No        | Array of objects | Specifies the list of planned tasks. For details, see <a href="#">Table 5-202</a> .  |

**Table 5-201** page\_info field description

| Parameter   | Mandatory | Type   | Description   |
|-------------|-----------|--------|---|
| next_marker | No        | String | Specifies the <b>marker</b> value of the next page. |

**Table 5-202** scheduled\_tasks field description

| Parameter        | Mandatory | Type   | Description  |
|------------------|-----------|--------|--|
| task_id          | No        | String | Specifies the planned task ID.   |
| scaling_group_id | No        | String | Specifies the AS group ID.   |
| name             | No        | String | Specifies the planned task name.   |
| scheduled_policy | No        | Object | Specifies the planned task policy. For details, see <a href="#">Table 5-203</a> .                      |
| instance_number  | No        | Object | Specifies the instance number settings of the AS group. For details, see <a href="#">Table 5-204</a> . |
| create_time      | No        | String | Specifies the creation time.   |
| tenant_id        | No        | String | Specifies the tenant ID.   |
| domain_id        | No        | String | Specifies the account ID.  |
| update_time      | No        | String | Specifies the update time.   |

**Table 5-203** `scheduled_policy` field description

| Parameter                     | Mandatory | Type   | Description  |
|-------------------------------|-----------|--------|--|
| <code>start_time</code>       | No        | String | Specifies the time when the valid period of the planned task starts. This parameter is valid only when <b>recurrence_type</b> is specified. The format is <code>yyyy-MM-dd'T'HH:mm'Z'</code> . If this parameter is left empty, the time when the task is successfully created is used by default.                         |
| <code>end_time</code>         | No        | String | Specifies the time when the valid period of the planned task ends. This parameter is valid and mandatory only if <b>recurrence_type</b> is specified. The format is <code>yyyy-MM-dd'T'HH:mm'Z'</code> .   |
| <code>launch_time</code>      | Yes       | String | Specifies the time when the planned task is executed. The UTC time is used. If <b>recurrence_type</b> is left empty or null, the format of the execution time is <code>yyyy-MM-dd'T'HH:mm'Z'</code> . If <b>recurrence_type</b> is specified, the format of the execution time is <code>HH:mm</code> .                     |
| <code>recurrence_type</code>  | No        | String | If this parameter is left blank or null, the planned task is executed at a specified time point. If this parameter is set to <b>DAILY</b> , <b>WEEKLY</b> , or <b>MONTHLY</b> , the planned task is executed periodically by day, week, or month.  |
| <code>recurrence_value</code> | No        | String | This parameter is mandatory only if <b>recurrence_type</b> is set to <b>WEEKLY</b> or <b>MONTHLY</b> . Multiple dates are separated by commas (,). When <b>recurrence_type</b> is set to <b>WEEKLY</b> , the value ranges from 1 to 7. If <b>recurrence_type</b> is set to <b>MONTHLY</b> , the value ranges from 1 to 31. |

**Table 5-204 instance\_number** field description

| Parameter | Mandatory | Type    | Description   |
|-----------|-----------|---------|---|
| max       | No        | Integer | Specifies the maximum number of instances in the AS group.  |
| min       | No        | Integer | Specifies the minimum number of instances in the AS group.  |
| desire    | No        | Integer | Specifies the expected number of instances in the AS group. |

### Example Response

```
{
  "page_info": {
    "next_marker": "xxxx"
  },
  "scheduled_tasks": [
    {
      "task_id": "fd7d63ce-8f5c-443e-b9a0-bef9386b23b3",
      "name": "task_01",
      "scheduled_policy": {
        "start_time": "2016-01-0T17:31Z",
        "end_time": "2016-02-08T17:31Z",
        "launch_time": "17:00",
        "recurrence_type": "Daily"
      },
      "scaling_group_id": "e5d27f5c-dd76-4a61-b4bc-a67c5686719a",
      "instance_number": {
        "max": 10
      }
    }
  ]
}
```

### 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. Then, the request can be processed.      |
| 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](#).

### 5.11.3 Updating a Planned Task

#### Function

This API is used to update a planned task of an AS group.

#### URI

PUT /autoscaling-api/v1/{project\_id}/scaling-groups/{scaling\_group\_id}/scheduled-tasks/{scheduled\_task\_id}

**Table 5-205** Parameter description

| Parameter         | Mandatory | Type   | Description                    |
|-------------------|-----------|--------|--------------------------------|
| project_id        | Yes       | String | Specifies the project ID.      |
| scaling_group_id  | Yes       | String | Specifies the AS group ID.     |
| scheduled_task_id | Yes       | String | Specifies the planned task ID. |

## Request

**Table 5-206** Request parameters

| Parameter        | Mandatory | Type   | Description  |
|------------------|-----------|--------|--|
| name             | No        | String | Specifies the planned task name.   |
| scheduled_policy | No        | Object | Specifies the planned task policy. For details, see <a href="#">Table 5-207</a> .                      |
| instance_number  | No        | Object | Specifies the instance number settings of the AS group. For details, see <a href="#">Table 5-208</a> . |

**Table 5-207** `scheduled_policy` field description

| Parameter  | Mandatory | Type   | Description  |
|------------|-----------|--------|--|
| start_time | No        | String | Specifies the time when the valid period of the planned task starts. This parameter is valid only when <b>recurrence_type</b> is specified. The format is yyyy-MM-dd'T'HH:mm'Z'. If this parameter is left empty, the time when the task is successfully created is used by default. |
| end_time   | No        | String | Specifies the time when the valid period of the planned task ends. This parameter is valid and mandatory only if <b>recurrence_type</b> is specified. The format is yyyy-MM-dd'T'HH:mm'Z'.   |

| Parameter        | Mandatory | Type   | Description  |
|------------------|-----------|--------|--|
| launch_time      | Yes       | String | Specifies the time when the planned task is executed. The UTC time is used. If <b>recurrence_type</b> is left empty or null, the format of the execution time is yyyy-MM-dd'T'HH:mm'Z'. If <b>recurrence_type</b> is specified, the format of the execution time is HH:mm.   |
| recurrence_type  | No        | String | If this parameter is left blank or null, the planned task is executed at a specified time point. If this parameter is set to <b>DAILY</b> , <b>WEEKLY</b> , or <b>MONTHLY</b> , the planned task is executed periodically by day, week, or month.  |
| recurrence_value | No        | String | This parameter is mandatory only if <b>recurrence_type</b> is set to <b>WEEKLY</b> or <b>MONTHLY</b> . Multiple dates are separated by commas (,). When <b>recurrence_type</b> is set to <b>WEEKLY</b> , the value ranges from 1 to 7. If <b>recurrence_type</b> is set to <b>MONTHLY</b> , the value ranges from 1 to 31. |

Table 5-208 instance\_number field description

| Parameter | Mandatory | Type    | Description   |
|-----------|-----------|---------|---|
| max       | No        | Integer | Specifies the maximum number of instances in the AS group.  |
| min       | No        | Integer | Specifies the minimum number of instances in the AS group.  |
| desire    | No        | Integer | Specifies the expected number of instances in the AS group. |

## Example Request

This example updates the planned task **0h327883-324n-4dzd-9c61-68d03ee191dd** by setting the maximum number of instances in the AS group to **10** and the minimum number of instances to **5** at 17:00 every day.

```
PUT https://{Endpoint}/v1/{project_id}/scaling-groups/xxxxxx/scheduled-tasks/0h327883-324n-4dzd-9c61-68d03ee191dd
```

```
{
  "name": "task_01",
  "scheduled_policy": {
    "start_time": "2016-01-08T17:31Z",
    "end_time": "2016-02-08T17:31Z",
    "launch_time": "17:00",
    "recurrence_type": "Daily"
  },
  "instance_number": {
    "max": 10,
    "min": 5
  }
}
```

## 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. Then, the request can be processed. |
| 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.            |

| 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 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](#).

## 5.11.4 Deleting a Planned Task

### Function

This API is used to delete a planned task of an AS group.

### URI

DELETE /autoscaling-api/v1/{project\_id}/scaling-groups/{scaling\_group\_id}/scheduled-tasks/{scheduled\_task\_id}

**Table 5-209** Parameter description

| Parameter         | Mandatory | Type   | Description                    |
|-------------------|-----------|--------|--------------------------------|
| project_id        | Yes       | String | Specifies the project ID.      |
| scaling_group_id  | Yes       | String | Specifies the AS group ID.     |
| scheduled_task_id | Yes       | String | Specifies the planned task ID. |

### Request

None

### Example Request

This example deletes the scheduled task whose ID is **906f73ff-56e8-41b2-a005-8157d0c60360**.



```
DELETE https://{Endpoint}/v1/{project_id}/scaling-groups/{scaling_group_id}/scheduled-tasks/  
906f73ff-56e8-41b2-a005-8157d0c60360
```

## 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. Then, the request can be processed.      |
| 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.        |

| Returned Value          | Description   |
|-------------------------|---|
| 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](#).

## 5.12 API Version Query

### 5.12.1 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 5-210** Response parameters

| Parameter | Type                                      | Description                 |
|-----------|---|-----------------------------|
| versions  | Array of <a href="#">versions</a> objects | Specifies the API versions. |

**Table 5-211** versions field description

| Parameter | Type   | Description                   |
|-----------|--------|-------------------------------|
| id        | String | Specifies the API version ID. |

| Parameter   | Type                                   | Description   |
|-------------|--|---|
| links       | Array of <a href="#">links</a> objects | Specifies the API URL. For details, see <a href="#">Table 5-212</a> .   |
| min_version | String                                 | Specifies the earliest supported API version number.  |
| status      | String                                 | Specifies the API version status. <ul style="list-style-type: none"><li>• <b>CURRENT</b>: indicates a primary version.</li><li>• <b>SUPPORTED</b>: indicates an earlier version which is still supported.</li><li>• <b>DEPRECATED</b>: indicates a deprecated version which may be deleted later.</li></ul> |
| updated     | String                                 | Specifies the release date of an API version.   |
| version     | String                                 | Specifies the latest supported API version number.  |

**Table 5-212** 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"
        }
      ]
    },
    {
      "id": "v2",
      "links": [
        {
          "href": "https://as.XXX.mycloud.com/autoscaling-api/v2/",
          "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.  |
| 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](#).

## 5.12.2 Querying an API Version

### Function

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

### URI

GET /{api\_version}

**Table 5-213** 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 5-214** Response parameters

| Parameter | Type                           | Description                        |
|-----------|--------------------------------|------------------------------------|
| version   | <a href="#">version</a> object | Specifies a specified API version. |

**Table 5-215** [version](#) field description

| Parameter   | Type                                   | Description   |
|-------------|--|---|
| id          | String                                 | Specifies the API version ID.   |
| links       | Array of <a href="#">links</a> objects | Specifies the API URL. For details, see <a href="#">Table 5-216</a> . |
| min_version | String                                 | Specifies the earliest supported API version number.                  |

| Parameter | Type   | Description   |
|-----------|--------|---|
| status    | String | Specifies the API version status. <ul style="list-style-type: none"> <li>● <b>CURRENT</b>: indicates a primary version.</li> <li>● <b>SUPPORTED</b>: indicates an earlier version which is still supported.</li> <li>● <b>DEPRECATED</b>: indicates a deprecated version which may be deleted later.</li> </ul> |
| updated   | String | Specifies the release date of an API version.   |
| version   | String | Specifies the latest supported API version number.  |

**Table 5-216** 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. |

| 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](#).

# 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-tlq",
  "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  
URI 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,
    "notifications": null,
    "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": [
        "XXa",
        "XXb"
      ],
      "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": "f06c0112570743b51c0e8f8be1f235bab",
      "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": "863cae2-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": "f06c0112570743b51c0e8fbc1f235bab",
"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_group/{scaling_group_id}/action | as:groups:action | √           | √                  |

### 7.3 AS Configurations

| Permission                        | API   | Action            | IAM Project | Enterprise Project |
|-----------------------------------|---|-------------------|-------------|--------------------|
| Creating an AS configuration      | POST / autoscaling-api/v1/{project_id}/scaling_configuration                              | as:configs:create | √           | √                  |
| Querying AS configurations        | GET / autoscaling-api/v1/{project_id}/scaling_configuration                               | as:configs:list   | √           | √                  |
| Querying AS configuration details | GET / autoscaling-api/v1/{project_id}/scaling_configuration/{scaling_configuration_id}    | as:configs:get    | √           | √                  |
| Deleting an AS configuration      | DELETE / autoscaling-api/v1/{project_id}/scaling_configuration/{scaling_configuration_id} | as:configs:delete | √           | √                  |

| Permission                       | API   | Action                 | IAM Project | Enterprise Project |
|----------------------------------|---|------------------------|-------------|--------------------|
| Batch deleting AS configurations | POST / autoscaling-api/v1/{project_id}/scaling_configurations | as:configs:batchDelete | √           | √                  |

## 7.4 Instances

| Permission                                    | API   | Action                   | IAM Project | Enterprise Project |
|---|---|--------------------------|-------------|--------------------|
| Querying instances in an AS group             | GET / autoscaling-api/v1/{project_id}/scaling_group_instance/{scaling_group_id}/list    | as:instances:list        | √           | √                  |
| Removing instances from an AS group           | DELETE / autoscaling-api/v1/{project_id}/scaling_group_instance/{instance_id}           | as:instances:delete      | √           | √                  |
| Performing operations on instances in batches | POST / autoscaling-api/v1/{project_id}/scaling_group_instance/{scaling_group_id}/action | as:instances:batchAction | √           | √                  |

## 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_policy_id}     | as:policies:delete | √           | √                  |
| Creating an AS policy  | POST / autoscaling-api/v2/{project_id}/scaling_policy                             | as:policies:create | √           | √                  |
| Modifying an AS policy | PUT / autoscaling-api/v2/{project_id}/scaling_policy / {scaling_policy_id}        | as:policies:update | √           | √                  |
| Querying AS policies   | GET / autoscaling-api/v2/{project_id}/scaling_policy / {scaling_resource_id}/list | as:policies:list   | √           | √                  |

| Permission                                      | API   | Action                            | IAM Project | Enterprise Project |
|---|---|-----------------------------------|-------------|--------------------|
| Querying AS policies                            | GET / autoscaling-api/v2/{project_id}/scaling_policy{?scaling_resource_id,scaling_resource_type,scaling_policy_name,scaling_policy_id,scaling_policy_type,start_number,limit,sort_by,order,enterprise_project_id} | as:groups:get<br>as:policies:list | √           | √                  |
| Querying AS policy details                      | GET / autoscaling-api/v2/{project_id}/scaling_policy/{scaling_policy_id}  | as:policies:get                   | √           | √                  |
| Performing operations on AS policies in batches | POST / autoscaling-api/v1/{project_id}/scaling_policies/action  | as:policies:batchAction           | √           | √                  |

## 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:activityLogs:list | √           | √                  |
| Querying scaling action logs (V2) | GET / autoscaling-api/v2/{project_id}/scaling_activity_log/{scaling_group_id} | as:activityLogs:list | √           | √                  |

## 7.8 Quotas

| Permission                             | API   | Action        | IAM Project | Enterprise Project |
|--|---|---------------|-------------|--------------------|
| Querying AS quotas                     | GET / autoscaling-api/v1/{project_id}/quotas                    | as:quotas:get | √           | √                  |
| Querying AS policy and instance quotas | GET / autoscaling-api/v1/{project_id}/quotas/{scaling_group_id} | as:quotas:get | √           | √                  |

## 7.9 Notifications

| Permission                                | API   | Action                | IAM Project | Enterprise Project |
|---|---|-----------------------|-------------|--------------------|
| Configuring notifications for an AS group | PUT / autoscaling-api/v1/{project_id}/scaling_notification/{scaling_group_id} | as:notifications:set  | √           | √                  |
| Querying notifications of an AS group     | GET / autoscaling-api/v1/{project_id}/scaling_notification/{scaling_group_id} | as:notifications:list | √           | √                  |



| Permission                             | API  | Action                  | IAM Project | Enterprise Project |
|--|--|-------------------------|-------------|--------------------|
| Deleting a notification of an AS group | DELETE / autoscaling-api/v1/{project_id}/scaling_notification/{scaling_group_id}/{topic_urn} | as:notifications:delete | √           | √                  |

## 7.10 Lifecycle Hooks

| Permission                      | API   | Action                    | IAM Project | Enterprise Project |
|---------------------------------|---|---------------------------|-------------|--------------------|
| Creating a lifecycle hook       | POST / autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}                      | as:lifecycle Hooks:create | √           | √                  |
| Querying lifecycle hooks        | GET / autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}/list                  | as:lifecycle Hooks:list   | √           | √                  |
| Querying lifecycle hook details | GET / autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}/{lifecycle_hook_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:lifecycle Hooks:update | √           | √                  |
| Calling back an instance lifecycle hook | PUT / autoscaling-api/v1/{project_id}/scaling_instance_hook/{scaling_group_id}/callback                  | as:instance Hooks:action  | √           | √                  |
| Querying instance suspension            | GET / autoscaling-api/v1/{project_id}/scaling_instance_hook/{scaling_group_id}/list                      | as:instance Hooks:list    | √           | √                  |
| Deleting a lifecycle hook               | DELETE / autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}/{lifecycle_hook_name} | as:lifecycle Hooks: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.<br><b>NOTE</b><br>This metric is unavailable if the image has no VMTools 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 | $\geq 0$    | 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 | $\geq 0$    | The monitored object is an AS group.  |
| instance_num                       | Number of Instances  | Number of available instances in a monitored object                                | $\geq 0$    | The monitored object is an AS group.<br>Available ECSs are <b>INSERVICE</b> 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           | $\geq 0$    | 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          | $\geq 0$    | 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     | $\geq 0$    | 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    | $\geq 0$    | 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 <b>project id</b> 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 <b>include te_admin, as_admin</b> , 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 <b>op_suspended</b> , 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 <b>op_restricted</b> , 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.1001    | The value of parameter Start number is invalid.                       | The <b>start number</b> value is invalid.  | Enter a valid <b>start number</b> value.   |
| 400              | AS.1002    | The value of parameter Limit is invalid.                              | The <b>limit</b> value is invalid.   | Enter a valid <b>limit</b> 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.   |
| 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 <b>instance_config</b> field is not specified.                                       | Enter a valid <b>instance_config</b> value.  |



| HTTP Status Code | Error Code | Error Message  | Description  | Solution  |
|------------------|------------|--|--|---|
| 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.   |
| 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.                    |

| HTTP Status Code | Error Code | Error Message  | Description  | Solution   |
|------------------|------------|--|--|--|
| 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 <b>personality</b> value.                    |
| 400              | AS.1028    | The disk in the AS configuration is null.  | The disk in the AS configuration is empty.   | Enter a valid <b>disk</b> 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.                                    |
| 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 <b>volumeType</b> of the disk in the AS configuration is invalid.                | Use a valid <b>volume_type</b> value.                      |

| HTTP Status Code | Error Code | Error Message  | Description   | Solution   |
|------------------|------------|--|---|--|
| 400              | AS.1034    | Parameter diskType in the AS configuration is invalid.                               | The <b>diskType</b> in the AS configuration is invalid.                           | Use a valid <b>disk_type</b> 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 <b>Message</b> 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.  |
| 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 <b>eip</b> field in the <b>public_ip</b> field is empty.                      | Ensure that the <b>eip</b> field is not empty when specifying the <b>public_ip</b> field.                          |

| HTTP Status Code | Error Code | Error Message   | Description   | Solution   |
|------------------|------------|---|---|--|
| 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 <b>userdata</b> in the AS configuration is invalid.     | Use a valid <b>userdata</b> .                    |
| 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.                          |

| HTTP Status Code | Error Code | Error Message   | Description   | Solution   |
|------------------|------------|---|---|--|
| 400              | AS.1052    | Parameter metadata in the AS configuration is invalid.                                  | The <b>metadata</b> in the AS configuration is invalid.   | Use a valid <b>metadata</b> , whose maximum length is 512 bytes and the <b>key</b> 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.  |
| 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.   |

| HTTP Status Code | Error Code | Error Message  | Description  | Solution   |
|------------------|------------|--|--|--|
| 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. |
| 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.                                       |

| HTTP Status Code | Error Code | Error Message  | Description  | Solution                             |
|------------------|------------|--|--|--------------------------------------|
| 400              | AS.1067    | The value of parameter Offset number is invalid.               | Parameter <b>offset</b> is invalid.                            | Use a valid <b>offset</b> 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 <b>tenancy</b> in the AS configuration is invalid.   | Use a valid <b>tenancy</b> 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 <b>marker</b> is invalid.                            | Use a valid <b>marker</b> value.     |
| 400              | AS.1075    | The image ID is invalid.                                       | Image ID in the AS configuration is invalid.                   | Use a correct image ID.              |
| 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. |

| HTTP Status Code | Error Code | Error Message  | Description   | Solution  |
|------------------|------------|--|---|---|
| 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 <b>market_type</b> 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 <b>multi_flavor_priority_policy</b> value.                  |
| 400              | AS.1086    | AS configuration is not available for AS group                   | The AS configuration is unavailable.                                  | Replace the AS configuration in the AS group.                           |



| HTTP Status Code | Error Code | Error Message  | Description  | Solution   |
|------------------|------------|--|--|--|
| 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.1097    | Parameter iops in the AS configuration is invalid  | Parameter <b>iops</b> in the AS configuration is invalid.  | Specify a valid <b>iops</b> .  |
| 400              | AS.1098    | Parameter throughput in the AS configuration is invalid                                    | Parameter <b>throughput</b> in the AS configuration is invalid.                                      | Specify a valid <b>throughput</b> .  |
| 400              | AS.1099    | Cannot create AS configuration with exist instance that volume_type is GPSSD2, ESSD2       | When you use an existing ECS to create an AS configuration, the disk type cannot be GPSSD2 or ESSD2. | Choose another ECS that use supported types of disks.                                      |
| 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.   |

| HTTP Status Code | Error Code | Error Message  | Description  | Solution  |
|------------------|------------|--|--|---|
| 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.  |
| 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.  |

| HTTP Status Code | Error Code | Error Message  | Description  | Solution   |
|------------------|------------|--|--|--|
| 400              | AS.2013    | Parameter <b>networks</b> in the AS group is invalid.  | Parameter <b>networks</b> 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.   |
| 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.                                    |

| HTTP Status Code | Error Code | Error Message   | Description   | Solution   |
|------------------|------------|---|---|--|
| 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.         |
| 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.                                     | <b>lb_listener_id</b> is alternative to <b>lbaas_listeners</b> .           |
| 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 <b>health_periodic_audit_method</b> value.                     |

| HTTP Status Code | Error Code | Error Message  | Description  | Solution  |
|------------------|------------|--|--|---|
| 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 <b>Inservice</b> 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 <b>health_periodic_audit_time</b> value.  |
| 400              | AS.2032    | Invalid instance removal policy.   | The instance removal policy for the AS group is invalid.   | Use a valid <b>instance_terminate_policy</b> 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.          |

| HTTP Status Code | Error Code | Error Message   | Description  | Solution  |
|------------------|------------|---|--|---|
| 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. |
| 400              | AS.2039    | Parameter <b>protocolPort</b> of the AS group is invalid.   | Parameter <b>protocolPort</b> of the AS group is invalid.  | Use a valid <b>protocolPort</b> .   |
| 400              | AS.2040    | Parameter <b>weight</b> of the AS group is invalid.   | Parameter <b>weight</b> of the AS group is invalid.  | Use a valid <b>weight</b> .   |
| 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 <b>pool</b> .   |
| 400              | AS.2043    | There is not avalid 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.   |

| HTTP Status Code | Error Code | Error Message   | Description   | Solution   |
|------------------|------------|---|---|--|
| 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 <b>health_periodic_audit_grace_period</b> 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.   |
| 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). |

| HTTP Status Code | Error Code | Error Message   | Description  | Solution  |
|------------------|------------|---|--|---|
| 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.  |
| 400              | AS.3002    | Invalid AS policy type.   | The AS policy type is invalid.   | Use a valid <b>scaling_policy_type</b> value.   |
| 400              | AS.3003    | The information about the AS policy is null.  | When the AS policy is scheduled or periodic, parameter <b>scheduled_policy</b> is empty.           | Use a valid <b>scheduled_policy</b> value.  |
| 400              | AS.3004    | Invalid recurrence type in the AS policy.   | The period type is incorrect.  | Use a valid <b>recurrence_type</b> 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 <b>end_time</b> value.  |



| HTTP Status Code | Error Code | Error Message  | Description  | Solution  |
|------------------|------------|--|--|---|
| 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 <b>launch_time</b> value.   |
| 400              | AS.3009    | The format of parameter lanchTime is incorrect.  | The triggering time format is incorrect.   | Use a correct triggering time format.   |
| 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 <b>scaling_policy_type</b> value.   |
| 400              | AS.3012    | Invalid cooldown period in the AS policy.  | The cooldown period in the AS policy is invalid.   | Enter a valid <b>cool_down_time</b> value.  |
| 400              | AS.3013    | The AS policy name is null.  | The AS policy name is not specified.   | Enter a valid <b>scaling_policy_name</b> 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 <b>scaling_policy_name</b> value.   |

| HTTP Status Code | Error Code | Error Message   | Description  | Solution  |
|------------------|------------|---|--|---|
| 400              | AS.3015    | The action in the AS policy is null.  | The execution action in the AS policy is not specified.                          | Enter a valid <b>scaling_policy_action</b> 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 <b>operation</b> 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 <b>operation</b> 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 <b>instance_number</b> 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.                               |
| 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 <b>action</b> 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 <b>recurrence_type</b> 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 <b>recurrence_value</b> value.        |

| HTTP Status Code | Error Code | Error Message   | Description  | Solution  |
|------------------|------------|---|--|---|
| 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 <b>recurrence_type</b> 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.                                 |
| 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 <b>scaling_policy_name</b> 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. |

| HTTP Status Code | Error Code | Error Message   | Description  | Solution  |
|------------------|------------|---|--|---|
| 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 <b>instance_percentage</b> 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 <b>instance_percentage</b> or <b>instance_number</b> .  |
| 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 <b>scaling_resource_type</b> 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.  |
| 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.  |

| HTTP Status Code | Error Code | Error Message   | Description   | Solution  |
|------------------|------------|---|---|---|
| 400              | AS.3043    | The limit which action in the AS policy operates on is invalid.                             | The value of parameter <b>limits</b> in the AS policy is invalid.                           | Use a valid <b>limits</b> value in the AS policy.   |
| 400              | AS.3044    | Parameter limits in the AS policy is invalid.   | 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 <b>Message</b> 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 <b>Message</b> 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 <b>Message</b> to obtain the policy ID and the failure cause. |
| 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 <b>force_delete</b> 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.  |

| HTTP Status Code | Error Code | Error Message  | Description  | Solution  |
|------------------|------------|--|--|---|
| 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 <b>scaling_resource_type</b> 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 <b>delete_alarm</b> value.          |
| 400              | AS.3057    | The value of parameter <b>sort_by</b> in the request is invalid.                                   | The <b>sort_by</b> value in the request is invalid.                          | Use a valid <b>sort_by</b> value.               |
| 400              | AS.3058    | The value of parameter <b>order</b> in the request is invalid.                                     | The <b>order</b> value in the request is invalid.                            | Use a valid <b>order</b> value.                 |
| 400              | AS.4000    | The value of parameter <b>start_number</b> in the request for the instance is invalid.             | The <b>start_number</b> value in the instance request is invalid.            | Use a valid <b>start_number</b> value.          |
| 400              | AS.4001    | The value of parameter <b>limit</b> in the request for the instance is invalid.                    | The <b>limit</b> value in the instance request is invalid.                   | Use a valid <b>limit</b> value.                 |
| 400              | AS.4003    | The value of parameter <b>life_cycle_state</b> in the instance request is invalid.                 | The <b>life_cycle_state</b> value in the instance request is invalid.        | Use a valid <b>life_cycle_state</b> value.      |

| HTTP Status Code | Error Code | Error Message   | Description   | Solution                                |
|------------------|------------|---|---|---|
| 400              | AS.4004    | The value of parameter <code>health_status</code> in the request for the instance is invalid.                     | The <b>health_status</b> value in the instance request is invalid.                                    | Use a valid <b>health_status</b> value. |
| 400              | AS.4005    | Parameter <code>scaling_group_id</code> in the request for the instance does not exist.                           | The <b>scaling_group_id</b> in the instance request does not exist.                                   | Use a correct <b>scaling_group_id</b> . |
| 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.                   |
| 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 <code>start_number</code> in the request for the log about the expected number of instances is invalid. | The <b>start_number</b> in the request for the log about the expected number of instances is invalid. | Use a valid <b>start_number</b> value.  |

| HTTP Status Code | Error Code | Error Message   | Description   | Solution                               |
|------------------|------------|---|---|--|
| 400              | AS.4011    | The value of parameter <b>limit</b> in the request for the log about the expected number of instances is invalid. | The value of <b>limit</b> in the request for the log about the expected number of instances is invalid. | Use a valid <b>limit</b> value.        |
| 400              | AS.4012    | The value of parameter <b>logId</b> in the request for the log about the expected number of instances is invalid. | The <b>logId</b> in the request for the log about the expected number of instances is invalid.          | Use a valid <b>logId</b> 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 <b>inservice</b> status.   | The instance is not in <b>inservice</b> state.  | Select an <b>inservice</b> 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.   |
| 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.                |



| HTTP Status Code | Error Code | Error Message   | Description  | Solution                              |
|------------------|------------|---|--|---------------------------------------|
| 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 <b>active</b> 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.                    |
| 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.            |

| HTTP Status Code | Error Code | Error Message                                    | Description                                   | Solution   |
|------------------|------------|--|---|--|
| 400              | AS.4029    | Failed to add instances in a batch.              | Failed to batch add instances.                | If this error code is returned, use parameter <b>Message</b> 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 <b>Message</b> 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 <b>Message</b> 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 <b>Message</b> to obtain the instance ID and the failure cause.          |
| 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 <b>Message</b> 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.   |

| HTTP Status Code | Error Code | Error Message  | Description  | Solution   |
|------------------|------------|--|--|--|
| 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    | The ELB listener is unavailable.   | 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.   |
| 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    | The key pair 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.  |

| HTTP Status Code | Error Code | Error Message   | Description  | Solution                             |
|------------------|------------|---|--|--------------------------------------|
| 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.                   |
| 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.                   |

| HTTP Status Code | Error Code | Error Message  | Description   | Solution  |
|------------------|------------|--|---|---|
| 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.  |
| 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.  |

| HTTP Status Code | Error Code | Error Message  | Description  | Solution  |
|------------------|------------|--|--|---|
| 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 <b>matches</b> value is invalid.                           | Use a valid <b>matches</b> 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.                                |
| 400              | AS.7065    | The value of parameter <code>enterprise_project_id</code> in the request is invalid. | The request parameter <b>enterprise_project_id</b> is invalid. | Use a valid <b>enterprise_project_id</b> .        |
| 400              | AS.7100    | The tag policy does not allow the specified value for the following tag key: %s.     | The tag values for the tag key %s do not match the tag policy. | Check the tag or contact technical support.       |

| HTTP Status Code | Error Code | Error Message   | Description  | Solution  |
|------------------|------------|---|--|---|
| 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.   |
| 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.  |

| HTTP Status Code | Error Code | Error Message  | Description  | Solution           |
|------------------|------------|--|--|--------------------|
| 400              | AS.9003    | The value of parameter <code>start_number</code> in the request for the scaling activity log is invalid. | The <b>start_number</b> in the request for the scaling log is invalid.   | Use a valid value. |
| 400              | AS.9004    | The value of parameter <code>limit</code> in the request for the scaling activity log is invalid.        | The <b>limit</b> in the request for the scaling log is invalid.          | Use a valid value. |
| 400              | AS.9005    | The value of parameter <code>log_id</code> in the request for the scaling log is invalid.                | The <b>logId</b> 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. |
| 400              | AS.9008    | The value of parameter <code>start_number</code> in the request is invalid.                              | Parameter <b>start_number</b> in the AS policy execution log is invalid. | Use a valid value. |
| 400              | AS.9009    | The value of parameter <code>limit</code> in the request is invalid.                                     | Parameter <b>limit</b> in the AS policy execution log is invalid.        | Use a valid value. |
| 400              | AS.9010    | The value of parameter <code>log_id</code> in the request is invalid.                                    | Parameter <b>logId</b> in the AS policy execution log is invalid.        | Use a valid value. |
| 400              | AS.9011    | The value of parameter <code>scaling_resource_id</code> in the request is invalid.                       | The resource ID in the AS policy execution log is invalid.               | Use a valid value. |



| HTTP Status Code | Error Code | Error Message   | Description   | Solution                       |
|------------------|------------|---|---|--------------------------------|
| 400              | AS.9012    | The value of parameter type in the request for the scaling activity log is invalid.   | The <b>type</b> in the request for the scaling action log is invalid.   | Use a valid <b>type</b> value. |
| 400              | AS.9013    | The value of parameter status in the request for the scaling activity log is invalid. | The <b>status</b> in the request for the scaling action log is invalid. | Use a valid value.             |

# B Change History

| Released On | Description  |
|-------------|--|
| 2024-05-21  | This issue is the twenty-first official release, which incorporates the following changes: <ul style="list-style-type: none"><li>Added parameter <b>tags</b> in sections <a href="#">Creating an AS Group</a>, <a href="#">Querying AS Groups</a>, and <a href="#">Querying an AS Group</a>.</li><li>Added error code AS.7100.</li></ul>   |
| 2023-11-08  | This issue is the twentieth official release, which incorporates the following change: <ul style="list-style-type: none"><li>Added the <b>protocol_version</b> parameter to <a href="#">Creating an AS Group</a>, <a href="#">Querying AS Groups</a>, <a href="#">Querying an AS Group</a>, and <a href="#">Modifying an AS Group</a>.</li></ul>   |
| 2023-10-16  | This issue is the nineteenth official release, which incorporates the following change:<br>Added parameter <b>source_scaling_configuration_id</b> to <a href="#">Creating an AS Configuration</a> .  |
| 2023-09-08  | This issue is the eighteenth official release, which incorporates the following change:<br>Added sections <a href="#">Creating a Planned Task</a> , <a href="#">Querying Planned Tasks</a> , <a href="#">Updating a Planned Task</a> , and <a href="#">Deleting a Planned Task</a> .   |
| 2020-07-30  | This issue is the seventeenth official release, which incorporates the following changes:<br>Added <a href="#">Application Examples</a> .  |
| 2019-09-30  | This issue is the fourteenth official release, which incorporates the following changes: <ul style="list-style-type: none"><li>Added the <b>delete_volume</b> parameter to <a href="#">Creating an AS Group</a>, <a href="#">Querying AS Groups</a>, <a href="#">Querying an AS Group</a>, and <a href="#">Modifying an AS Group</a>.</li><li>Added error code AS.1090 to <a href="#">Error Codes</a>.</li></ul> |

| Released On | Description   |
|-------------|---|
| 2019-05-31  | <p>This issue is the fifteenth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Modified the <b>available_zones</b> description in <a href="#">Modifying an AS Group</a> because adding, changing, and deleting the AZ without disabling the AS group is supported.</li><li>• Added error code AS.2054 to <a href="#">Error Codes</a>.</li><li>• Optimized the document structure. Added <a href="#">API Calling</a>, <a href="#">Endpoints</a>, <a href="#">Constraints</a>, and <a href="#">Concepts</a>.</li></ul>  |
| 2019-04-30  | <p>This issue is the fourteenth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Added the <b>log_id</b> and <b>status</b> fields to <a href="#">Querying Scaling Action Logs (V2)</a>.</li><li>• Added error codes AS.9012 and AS.9013 to <a href="#">Error Codes</a>.</li><li>• Added <a href="#">Querying Tags</a>, <a href="#">Querying Tags of a Resource</a>, <a href="#">Creating or Deleting a Tag</a>, and <a href="#">Querying Resources by Tag</a> because tag management is supported.</li></ul>   |
| 2019-03-31  | <p>This issue is the thirteenth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Added parameter <b>market_type</b> to <a href="#">Creating an AS Configuration</a>.</li><li>• Added parameters <b>multi_flavor_priority_policy</b>, <b>multi_az_priority_policy</b>, <b>instance_config</b>, <b>delete_alarm</b>, and <b>alarm_id</b>.</li><li>• Added error codes AS.1085, AS.1086, AS.1087, AS.1088, AS.2053, AS.7016, AS.1083, AS.1084, and AS.3056 to <a href="#">Error Codes</a>.</li><li>• Modified error codes AS.1017, AS.1018, AS.1032, AS.1036, AS.1078, AS.1080, AS.1081, AS.1084, AS.2038, AS.2043, and AS.7011 in <a href="#">Error Codes</a>.</li></ul> |
| 2019-01-31  | <p>This issue is the twelfth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Added parameter <b>instance_append</b> and parameters related to the instance standby mode to <a href="#">Batch Managing Instances</a>.</li><li>• Added parameter <b>instance_standby_list</b> and parameters related to the instance standby mode to <a href="#">Querying Scaling Action Logs (V2)</a>.</li><li>• Added error codes AS.2051, AS.2052, AS.4036, AS.4037, AS.4038, and AS.4039 to <a href="#">Error Codes</a>.</li></ul>  |

| Released On | Description   |
|-------------|---|
| 2018-12-30  | <p>This issue is the eleventh official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Added parameters <b>tenancy</b> and <b>dedicated_host_id</b> to the <b>instance_config</b> field in <a href="#">Creating an AS Configuration</a>.</li><li>• Added error codes AS.1071, AS.1073, AS.1077, AS.1078, AS.1079, AS.1081, AS.2048, AS.2049, AS.2050, AS.1080, and AS.1082 to <a href="#">Error Codes</a>.</li><li>• Modified error codes AS.1068, AS.1075, and AS.1076 in <a href="#">Error Codes</a>.</li></ul>  |
| 2018-11-30  | <p>This issue is the tenth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Added parameter <b>protect_from_scaling_down</b> to <a href="#">Querying Instances in an AS Group</a>.</li><li>• Added <a href="#">Querying Scaling Action Logs (V2)</a>.</li><li>• Added error code AS.2047 to <a href="#">Error Codes</a>.</li><li>• Modified error codes AS.2015, AS.2035, and AS.2042 in <a href="#">Error Codes</a>.</li></ul>  |
| 2018-09-30  | <p>This issue is the ninth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Added parameter <b>id</b> to the <b>bandwidth</b> field and optimized descriptions of other parameters to <a href="#">Creating an AS Configuration</a> and <a href="#">Querying AS configurations</a>.</li><li>• Added error codes AS.1033, AS.1046, AS.1047, AS.1048, AS.1068, AS.1069, AS.1070, AS.1071, AS.1072, AS.1074, AS.1075, AS.1076, AS.7118, AS.3055, and AS.8004 to <a href="#">Error Codes</a>.</li><li>• Added parameter <b>server_group_id</b> to <a href="#">Creating an AS Configuration</a>.</li><li>• Added <a href="#">Querying AS Policies (V2)</a>.</li><li>• Added <a href="#">API Version Query</a>.</li><li>• Adjusted the outline of the document.</li></ul> |
| 2018-08-30  | <p>This issue is the eighth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Changed the default cooldown period to 300s.</li><li>• Added error code AS.1067 to <a href="#">Error Codes</a>.</li></ul>   |
| 2018-07-30  | <p>This issue is the seventh official release, which incorporates the following changes:</p> <p>Added 10s and 1 min as new options for the health check period to <a href="#">Creating an AS Group</a>.</p>   |

| Released On | Description  |
|-------------|--|
| 2018-05-30  | <p>This issue is the sixth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Added parameter <b>security_groups</b> to <b>AS Configurations</b>.</li><li>• Added parameter <b>meta_data</b> to <b>Querying an AS Policy (V2)</b>.</li><li>• Added <b>Batch Managing AS Policies</b>.</li><li>• Added parameter <b>meta_data</b> to <b>Querying AS Policy Execution Logs</b>.</li><li>• Modified error codes AS.3004, AS.3008, AS.3009, AS.3010, and AS.3033 in <b>Error Codes</b>.</li><li>• Added error codes AS.0026, AS.3045, AS.3046, AS.3047, AS.3048, and AS.3049 to <b>Error Codes</b>.</li></ul>   |
| 2018-04-30  | <p>This issue is the fifth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Added description of <b>health_periodic_audit_grace_period</b> to <b>Creating an AS Group</b>.</li><li>• Added description of <b>health_periodic_audit_grace_period</b> to <b>Modifying an AS Group</b>.</li><li>• Added the <b>scaling_policy_id</b> field to <b>Querying AS Policies Bound to an AS Group</b>.</li><li>• Added the <b>scaling_policy_id</b> and <b>scaling_policy_name</b> fields to <b>Querying Scaling Action Logs</b>.</li><li>• Added error codes AS.2046, AS.7044, AS.7045, AS.7047, AS.7048, AS.7049, AS.7050, and AS.7055 to <b>Error Codes</b>.</li></ul> |
| 2018-03-30  | <p>This issue is the fourth official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Added <b>Creating an AS Policy (V2)</b>.</li><li>• Added <b>Modifying an AS Policy (V2)</b>.</li><li>• Added <b>Querying AS Policies Bound to a Scaling Resource (V2)</b>.</li><li>• Added <b>Querying an AS Policy (V2)</b>.</li><li>• Added <b>AS Policy Execution Logs</b>.</li></ul>   |
| 2018-01-30  | <p>This issue is the third official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Added the field "Description" to <b>Batch Managing Instances</b>.</li><li>• Added the parameters for forcibly deleting an AS group and their description to <b>Deleting an AS Group</b>.</li><li>• Added a description of the typical ELB to <b>AS Groups</b>.</li><li>• Added the parameter <b>snapshot_id</b> to <b>AS Configurations</b>.</li><li>• Optimized descriptions of error codes.</li></ul>   |

| Released On | Description  |
|-------------|--|
| 2017-11-30  | <p>This issue is the second official release, which incorporates the following changes:</p> <ul style="list-style-type: none"><li>• Added the function of increasing or decreasing the number of instances in an AS group according to the percentage preset in the AS policy.</li><li>• Added AS monitoring metrics.</li><li>• Added the following error codes: AS.1019, AS.1020, AS.1053 to AS.1061, AS.2042, AS.2043, AS.3035, and AS.3036.</li><li>• Added parameters <b>dedicated_storage_id</b> and <b>data_disk_image_id</b>.</li></ul> |
| 2017-12-31  | <p>This issue is the first official release.</p>   |