Auto Scaling

API Reference

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1 Before You Start

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 the resources and manpower required. 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**.

1.3 Endpoints

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions. For the endpoint of the EVS 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?" in *Auto Scaling User Guide*.
- For more constraints, see API description.

1.5 Concepts

- Domain

  A domain is created upon successful registration. The domain 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 domain is a payment entity and should not be used directly to perform routine management. For security purposes, create users and grant them permissions for routine management.

- User

  A user is created using a domain to use cloud services. Each user has its own identity credentials (password and access keys).

  The domain name, username, and password will be required for API authentication.

- 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.

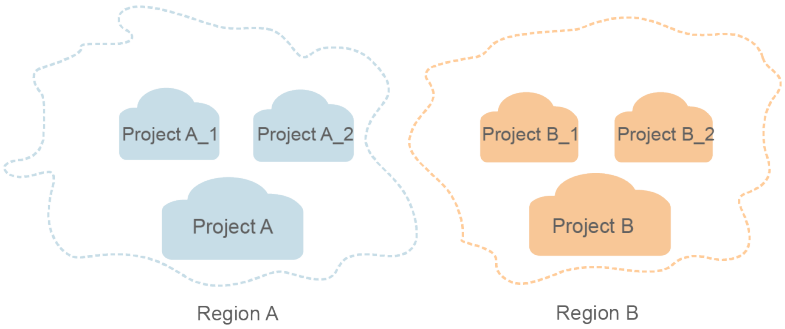
- Availability Zone (AZ)

  An AZ contains one or more physical data centers. Each AZ has independent cooling, fire extinguishing, moisture-proof, and electricity facilities. Within an AZ, computing, network, storage, and other resources are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to support cross-AZ high-availability systems.

- Project

  Projects group and isolate resources (including compute, storage, and network resources) across physical regions. A default project is provided for each region, and subprojects can be created under each default project. Users can be granted permissions to access all resources in a specific project. For more refined access control, create subprojects under a project and create resources in the subprojects. Users can then be assigned permissions to access only specific resources in the subprojects.

Figure 1-1 Project isolating model



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 Authentication

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

- Token-based authentication: Requests are authenticated using a token.
- AK/SK-based authentication: Requests are authenticated by encrypting the request body using an AK/SK pair. AK/SK-based authentication is recommended because it is more secure than token-based authentication.

Token-based Authentication

NOTE

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

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

You can obtain a token by calling the **Obtaining User Token** API. When you call the API, set **auth.scope** in the request body to **project**.

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



```
            "name": "xxxxxxxx"
        }
    }
  }
}
```

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.ae-ad-1.myhuaweicloud.com/v3/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

AK/SK-based Authentication

NOTE

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

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

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

In AK/SK-based authentication, you can use an AK/SK to sign requests based on the signature algorithm or 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.

3.2 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 , the request is successful.

Response Header

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

Figure 3-1 shows the response header fields for the API used to . 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 3-1 Header fields of the response to the request for obtaining a user token

(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 . 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.

3.3 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 the project ID by calling the IAM API used to query project information based on the 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": "65382450e8f64ac0870cd180d14e684b",
            "is_domain": false,
            "parent_id": "65382450e8f64ac0870cd180d14e684b",
            "name": "project_name",
            "description": "",
            "links": {
                "next": null,
                "previous": null,
                "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
            },
            "id": "a4a5d4098fb4474fa22cd05f897d6b99",
            "enabled": true
        }
    ],
    "links": {
        "next": null,
        "previous": null,
        "self": "https://www.example.com/v3/projects"
    }
}
```

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 **My Credentials** page, view the project ID in the project list.

4 Getting Started

4.1 Creating an AS Group

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

NOTE

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

Involved APIs

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

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

Procedure

1. Obtain the token by following instructions in **Authentication**.
2. Obtain the project ID (**project_id**). For details, see **Obtaining a Project ID**.
3. Add the **Content-Type** key to the request header. The value of **Content-Type** is **application/json**.
4. Add the **X-Auth-Token** key to the request header. The value is the token obtained in **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 API

5.1 AS Groups

5.1.1 Creating an AS Group

Function

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 balancing.

- Each user can create a maximum of 10 AS groups 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.

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 Message

- Request parameters

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	No	String	Specifies the AS configuration ID, which can be obtained using the API for querying AS configurations. For details, see **Querying AS Configurations**.
desire_instance_number	No	Integer	Specifies the expected number of instances. The default value is the minimum number of instances. The value ranges from the minimum number of instances to the maximum number of instances.
min_instance_number	No	Integer	Specifies the minimum number of instances. The default value is **0**.
max_instance_number	No	Integer	Specifies the maximum number of instances. The default value is **0**.
cool_down_time	No	Integer	Specifies the cooldown period (in seconds). The value ranges from 0 to 86400 and is 300 by default. After a scaling action is triggered, the system starts the cooldown period. During the cooldown period, scaling actions triggered by alarms will be denied. Scheduled, periodic, and manual scaling actions are not affected.
lbaas_listeners	No	Array	Specifies information about an enhanced load balancer. The system supports the binding of up to six load balancers. This parameter is in list data structure. For details, see **Table 5-3**.

Parameter	Mandatory	Type	Description
available_zones	No	Array	Specifies the AZ information. The ECS associated with a scaling action will be created in a specified AZ. If you do not specify an AZ, the system automatically specifies one.
networks	Yes	Array	Specifies network information. The system supports up to five subnets. The first subnet transferred serves as the primary NIC of the ECS by default. This parameter is in data structure. For details, see **Table 5-4**.
security_groups	No	Array	Specifies the security group. A maximum of one security group can be selected. This parameter is in data structure. For details, see **Table 5-5**. If the security group is specified both in the AS configuration and AS group, the security group specified in the AS configuration prevails. If the security group is not specified in either of them, the default security group is used. For your convenience, you are advised to specify the security group in the AS configuration.
vpc_id	Yes	String	Specifies the VPC ID, which can be obtained using the API for querying VPCs. For details, see "Querying VPCs" in *Virtual Private Network API Reference*.

Parameter	Mandatory	Type	Description
health_periodic_audit_method	No	String	Specifies the health check method for instances in the AS group. The health check methods include **ELB_AUDIT** and **NOVA_AUDIT**. When load balancing is configured for an AS group, the default value is **ELB_AUDIT**. Otherwise, the default value is **NOVA_AUDIT**. • **ELB_AUDIT**: indicates the ELB health check, which takes effect in an AS group with a listener. • **NOVA_AUDIT**: indicates the ECS health check, which is the health check method delivered with AS.
health_periodic_audit_time	No	Integer	Specifies the instance health check period. The value can be **1**, **5**, **15**, **60**, or **180** in the unit of minutes. If this parameter is not specified, the default value is **5**. If the value is set to **0**, health check is performed every 10 seconds.
health_periodic_audit_grace_period	No	Integer	Specifies the grace period for instance health check. The unit is second and value range is 0-86400. The default value is **600**. The health check grace period starts after an instance is added to an AS group and is enabled. The AS group will start checking the instance status only after the grace period ends. This parameter is valid only when the instance health check method of the AS group is **ELB_AUDIT**.

Parameter	Mandatory	Type	Description
instance_terminate_policy	No	String	Specifies the instance removal policy. • **OLD_CONFIG_OLD_INSTANCE** (default): The earlier-created instances based on the earlier-created AS configurations are removed first. • **OLD_CONFIG_NEW_INSTANCE**: The later-created instances based on the earlier-created AS configurations are removed first. • **OLD_INSTANCE**: The earlier-created instances are removed first. • **NEW_INSTANCE**: The later-created instances are removed first.
notifications	No	Array	Specifies the notification mode. **EMAIL** 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 **Notifications**.
delete_publicip	No	Boolean	Specifies whether to delete the EIP bound to the ECS when deleting the ECS. The value can be **true** or **false**. The default value is **false**. • **true**: deletes the EIP bound to the ECS when deleting the ECS. If the EIP is billed in yearly/monthly mode, it will not be deleted when the ECS is deleted. • **false**: only unbinds the EIP bound to the ECS when deleting the ECS.

Parameter	Mandatory	Type	Description
delete_volume	No	Boolean	Specifies whether to delete the data disks attached to the ECS when deleting the ECS. The value can be **true** or **false**. The default value is **false**. • **true**: deletes the data disks attached to the ECS when deleting the ECS. If the data disks are billed in yearly/monthly mode, they will not be deleted when the ECS is deleted. • **false**: only detaches the data disks attached to the ECS when deleting the ECS.
multi_az_priority_policy	No	String	Specifies the priority policy used to select target AZs when adjusting the number of instances in an AS group. • **EQUILIBRIUM_DISTRIBUTE** (default): When adjusting the number of instances, ensure that instances in each AZ in the **available_zones** list is evenly distributed. If instances cannot be added in the target AZ, select another AZ based on the **PICK_FIRST** policy. • **PICK_FIRST**: When adjusting the number of instances, target AZs are determined in the order in the **available_zones** list.

Table 5-3 lbaas_listeners field description

Parameter	Mandatory	Type	Description
pool_id	Yes	String	Specifies the backend ECS group ID.
protocol_port	Yes	Integer	Specifies the backend protocol ID, which is the port on which a backend ECS listens for traffic. The port ID ranges from 1 to 65535.

Parameter	Mandatory	Type	Description
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.

Table 5-4 networks field description

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

Table 5-5 security_groups field description

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

- Example request

  The following example shows how to create an AS group:

  - The AS group is named **GroupNameTest**.
  - The AS configuration ID is **47683a91-93ee-462a-a7d7-484c006f4440**.
  - The VPC ID is **a8327883-6b07-4497-9c61-68d03ee193a**, and the network ID is **3cd35bca-5a10-416f-8994-f79169559870**.
  - The maximum number of instances is **10**, the expected number of instances is **0**, and the minimum number of instances is **0**.
  - The health check method is **ECS health check**.
  - When adjusting the number of instances, select target AZ based on the PICK FIRST policy.

  The request example is as follows:

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

{
    "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"
        }
```



```
    ],
    "multi_az_priority_policy": "PICK_FIRST"
}
```

Response Message

- Response parameters

  Table 5-6 Response parameter

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 so that 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 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**.

5.1.2 Querying AS Groups

Function

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

- Search criteria can be the AS group name, AS configuration ID, AS group status, start line number, and number of records.
- If no search criteria are specified, a maximum of 20 AS groups can be queried for a tenant 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 5-7 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_group_name	No	String	Specifies the AS group name. Supports fuzzy search.
scaling_configuration_id	No	String	Specifies the AS configuration ID, which can be obtained using the API for querying AS configurations. For details, see **Querying AS Configurations**.

Parameter	Mandatory	Type	Description
scaling_group_status	No	String	Specifies the AS group status. The options are as follows: • **INSERVICE**: indicates that the AS group is functional. • **PAUSED**: indicates that the AS group is paused. • **ERROR**: indicates that the AS group malfunctions. • **DELETING**: indicates that the AS group is being deleted.
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum value is **0**, and there is no limit on the maximum value.
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value range is 0 to 100.

Request Message

- Request parameters

  None

- Example request

  This example shows how to query 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 Message

- Response parameters

  Table 5-8 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	Specifies the scaling group list.

Table 5-9 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 status of the AS group.
scaling_configuration_id	String	Specifies the AS configuration ID.
scaling_configuration_name	String	Specifies the AS configuration name.
current_instance_number	Integer	Specifies the number of current instances in the AS group.
desire_instance_number	Integer	Specifies the expected number of instances in the AS group.
min_instance_number	Integer	Specifies the minimum number of instances in the AS group.
max_instance_number	Integer	Specifies the maximum number of instances in the AS group.
cool_down_time	Integer	Specifies the cooldown period (s).
lbaas_listeners	Array	Specifies enhanced load balancers. For details, see **Table 5-10**.
available_zones	Array	Specifies the AZ information.
networks	Array	Specifies networks. For details, see **Table 5-11**.
security_groups	Array	Specifies security groups. For details, see **Table 5-13**.
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.

Parameter	Type	Description
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	Specifies the notification mode. **EMAIL** refers to notification by email.
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.
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.

Table 5-10 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 ID, 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.

Table 5-11 networks field description

Parameter	Type	Description
id	String	Specifies the network ID.
ipv6_enable	Boolean	Specifies whether to support IPv6 addresses. If the value of this parameter is set to **true**, the NIC supports IPv6 addresses. The default value is **false**.
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.

Table 5-12 ipv6_bandwidth field description

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

Table 5-13 security_groups field description

Parameter	Type	Description
id	String	Specifies the security group ID.

- Example response

```
{
   "limit": 20,
   "scaling_groups": [
      {
         "networks": [
            {
               "id": "a8327883-6b07-4497-9c61-68d03ee193a",
               "ipv6_enable": true,
               "ipv6_bandwidth":
                  {
                     "id": "076ee2ff-f23e-4338-b8ac-1bc7278532d5"
                  }
            }
         ],
         "available_zones": [
               "XXXa",
               "XXXb"
         ],
         "detail": null,
         "scaling_group_name": "as-group-test",
         "scaling_group_id": "77a7a397-7d2f-4e79-9da9-6a35e2709150",
         "scaling_group_status": "INSERVICE",
         "scaling_configuration_id": "1d281494-6085-4579-b817-c1f813be835f",
         "scaling_configuration_name": "healthCheck",
         "current_instance_number": 0,
         "desire_instance_number": 1,
         "min_instance_number": 0,
```



```
        "max_instance_number": 500,
        "cool_down_time": 300,
        "lb_listener_id": "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
        "multi_az_priority_policy": "PICK_FIRST"
    }
  ],
  "total_number": 1,
  "start_number": 0
}
```


Returned Values

- Normal

  200

- Abnormal

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

5.1.3 Querying AS Group Details

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 5-14 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 Message

- Request parameters

  None

- Example request

  This example shows how to query 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 Message

- Response parameters

Table 5-15 Response parameters

Parameter	Type	Description
scaling_group	Object	Specifies details about the AS group.

Table 5-16 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 status of the AS group.
scaling_configuration_id	String	Specifies the AS configuration ID.
scaling_configuration_name	String	Specifies the AS configuration name.
current_instance_number	Integer	Specifies the number of current instances in the AS group.
desire_instance_number	Integer	Specifies the expected number of instances in the AS group.
min_instance_number	Integer	Specifies the minimum number of instances in the AS group.
max_instance_number	Integer	Specifies the maximum number of instances in the AS group.
cool_down_time	Integer	Specifies the cooldown period (s).
lbaas_listeners	Array	Specifies enhanced load balancers. For details, see **Table 5-10**.
available_zones	Array	Specifies the AZ information.
networks	Array	Specifies networks. For details, see **Table 5-11**.
security_groups	Array	Specifies security groups. For details, see **Table 5-13**.
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.

Parameter	Type	Description
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	Specifies the notification mode. **EMAIL** refers to notification by email.
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.
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.

Table 5-17 networks field description

Parameter	Type	Description
id	String	Specifies the network ID.
ipv6_enable	Boolean	Specifies whether to support IPv6 addresses. If the value of this parameter is set to **true**, the NIC supports IPv6 addresses. The default value is **false**.

Parameter	Type	Description
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.

Table 5-18 ipv6_bandwidth field description

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

- 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,

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


Returned Values

- Normal

  200
- Abnormal

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

Error Codes

See **Error Codes**.

5.1.4 Modifying an AS Group

Function

This API is used to modify a specified AS group.

- When the AS configuration of an AS group is changed, the existing instances created using the original AS configuration are not affected.
- If no scaling action is being performed, you can modify its subnet and AZ configurations.
- Changing the number of expected instances in an AS group will trigger a scaling action to add or remove instances to or from the AS group. The number of expected instances must be greater than or equal to the minimum number of instances and less than or equal to the maximum number of instances.

URI

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

Table 5-19 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 Message

- Request parameters

Table 5-20 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.
desire_instance_number	No	Integer	Specifies the expected number of instances. The value ranges from the minimum number of instances to the maximum number of instances.
min_instance_number	No	Integer	Specifies the minimum number of instances.
max_instance_number	No	Integer	Specifies the maximum number of instances, which is greater than or equal to the minimum number of instances.

Parameter	Mandatory	Type	Description
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	Specifies the AZ information. The ECS associated with a scaling action will be created in a specified AZ. If you do not specify an AZ, the system automatically specifies one. You can change the AZ of an AS group only when no scaling action is being performed in the group.
networks	No	Array	Specifies network information. The system supports up to five subnets. The first subnet transferred serves as the primary NIC of the ECS by default. This parameter is in data structure. For details, see **Table 5-22**. The value of this parameter can be changed only when all the following conditions are met: • No scaling actions are triggered in the AS group. • The number of instances in the AS group is 0. • The AS group is not in service.

Parameter	Mandatory	Type	Description
security_groups	No	Array	Specifies the security group. A maximum of one security group can be selected. This parameter is in data structure. For details, see **Table 5-23**. If the security group is specified both in the AS configuration and AS group, the security group specified in the AS configuration prevails. If the security group is not specified in either of them, the default security group is used. For your convenience, you are advised to specify the security group in the AS configuration. The value of this parameter can be changed only when all the following conditions are met: • No scaling actions are triggered in the AS group. • The number of instances in the AS group is 0. • The AS group is not in service.
lbaas_listeners	No	Array	Specifies information about an enhanced load balancer. The system supports the binding of up to six load balancers. This parameter is in list data structure. For details, see **Table 5-21**.

Parameter	Mandatory	Type	Description
health_periodic_audit_method	No	String	Specifies the health check method for instances in the AS group. The health check methods include **ELB_AUDIT** and **NOVA_AUDIT**. When load balancing is configured for an AS group, the default value is **ELB_AUDIT**. Otherwise, the default value is **NOVA_AUDIT**. • **ELB_AUDIT**: indicates the ELB health check, which takes effect in an AS group with a listener. • **NOVA_AUDIT**: indicates the ECS health check, which is the health check method delivered with AS.
health_periodic_audit_time	No	Integer	Specifies the health check period for the instances in the AS group. The value can be **1**, **5**, **15**, **60**, or **180** in the unit of minutes. If the value is set to **0**, health check is performed every 10 seconds.
instance_terminate_policy	No	String	Specifies the instance removal policy. • **OLD_CONFIG_OLD_INSTANCE** (default): The earlier-created instances based on the earlier-created AS configurations are removed first. • **OLD_CONFIG_NEW_INSTANCE**: The later-created instances based on the earlier-created AS configurations are removed first. • **OLD_INSTANCE**: The earlier-created instances are removed first. • **NEW_INSTANCE**: The later-created instances are removed first.

Parameter	Mandatory	Type	Description
health_periodic_audit_grace_period	No	Integer	Specifies the grace period for instance health check. The unit is second and value range is 0-86400. The default value is **600**. The health check grace period starts after an instance is added to an AS group and is enabled. The AS group will start checking the instance status only after the grace period ends. This parameter is valid only when the instance health check method of the AS group is **ELB_AUDIT**.
scaling_configuration_id	No	String	Specifies the AS configuration ID, which can be obtained using the API for querying AS configurations. For details, see **Querying AS Configurations**.
notifications	No	Array	Specifies the notification mode. **EMAIL** 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 **Notifications**.
delete_publicip	No	Boolean	Specifies whether to delete the EIP bound to the ECS when deleting the ECS. If you do not want to delete the EIP, set this parameter to **false**. Then, the system only unbinds the EIP from the ECS and reserves the EIP. • **true**: deletes the EIP bound to the ECS when deleting the ECS. If the EIP is billed in yearly/monthly mode, it will not be deleted when the ECS is deleted. • **false**: only unbinds the EIP bound to the ECS when deleting the ECS.

Parameter	Mandatory	Type	Description
delete_volume	No	Boolean	Specifies whether to delete the data disks attached to the ECS when deleting the ECS. The value can be **true** or **false**. The default value is **false**. • **true**: deletes the data disks attached to the ECS when deleting the ECS. If the data disks are billed in yearly/monthly mode, they will not be deleted when the ECS is deleted. • **false**: only detaches the data disks attached to the ECS when deleting the ECS.
multi_az_priority_policy	No	String	Specifies the priority policy used to select target AZs when adjusting the number of instances in an AS group. • **EQUILIBRIUM_DISTRIBUTE** (default): When adjusting the number of instances, ensure that instances in each AZ in the **available_zones** list is evenly distributed. If instances cannot be added in the target AZ, select another AZ based on the **PICK_FIRST** policy. • **PICK_FIRST**: When adjusting the number of instances, target AZs are determined in the order in the **available_zones** list.

Table 5-21 lbaas_listeners field description

Parameter	Mandatory	Type	Description
pool_id	Yes	String	Specifies the backend ECS group ID. The value of this parameter can be changed only when all the following conditions are met: • No scaling actions are triggered in the AS group. • The number of instances in the AS group is 0. • The AS group is not in service.
protocol_port	Yes	Integer	Specifies the backend protocol ID, which is the port on which a backend ECS listens for traffic. The port ID 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.

Table 5-22 networks field description

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

Table 5-23 security_groups field description

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

- Example request

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


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

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

Response Message

- Response parameters

  Table 5-24 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 so that the request can be processed.
408 Request Timeout	The request timed out.

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

Error Codes

See **Error Codes**.

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.

URI

DELETE /autoscaling-api/v1/{project_id}/scaling_group/{scaling_group_id}?force_delete=no

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.
force_delete	No	String	Specifies whether to forcibly delete an AS group. Options: • **no** (default): indicates that the AS group is not forcibly deleted. • **yes**: indicates to forcibly delete an AS group.

Request Message

- Request parameters

  None

- Example request

  This example shows how to forcibly delete 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 Message

- Response parameters

  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 so that 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 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 5-26 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 Message

- Request parameters

  Table 5-27 Request parameters

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

- Example request

  This example shows how to enable 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"
  }
  ```

Response Message

- Response parameters

  None

- Example response

  None

Returned Values

- Normal

  204

- Abnormal

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

Returned Value	Description
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication so that 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 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 of ECSs in an AS group. It defines the specifications of the instances to be added to the 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 5-28 Parameter description

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

Request Message

- Request parameters

Table 5-29 Request parameters

Parameter	Mandatory	Type	Description
scaling_configuration_name	Yes	String	Specifies the AS configuration name. The name contains only letters, digits, underscores (_), and hyphens (-), and cannot exceed 64 characters.
instance_config	Yes	Object	Specifies the ECS configuration. For details, see **Table 5-30**.

Table 5-30 instance_config field description

Parameter	Mandatory	Type	Description
instance_id	No	String	Specifies the ECS ID. When using the existing ECS specifications as the template to create AS configurations, specify this parameter. In this case, the **flavorRef**, **imageRef**, **disk**, **tenancy**, **dedicated_host_id**, and **security_groups** fields do not take effect. If the **instance_id** field is not specified, **flavorRef**, **imageRef**, and **disk** fields are mandatory.
flavorRef	No	String	Specifies the ECS flavor ID. A maximum of 10 flavors can be selected. Use a comma (,) to separate multiple flavor IDs. You can obtain its value from the API for querying details about flavors and extended flavor information.
imageRef	No	String	Specifies the image ID. Its value is the same as that of **image_id** for specifying the image selected during ECS creation. Obtain the value using the API for querying images. .
disk	No	Array	Specifies the disk group information. System disks are mandatory and data disks are optional. For details, see **Table 5-31**.
key_name		String	Specifies the name of the SSH key pair used to log in to the ECS. **NOTE** If both **key_name** and **user_data** are specified, **user_data** only injects user data.

Parameter	Mandatory	Type	Description
personality	No	Array	Specifies information about the injected file. Only text files can be injected. A maximum of five files can be injected at a time and the maximum size of each file is 1 KB. For details, see **Table 5-33**.
public_ip	No	Object	Specifies the EIP of the ECS. The EIP can be configured in two ways. For details, see **Table 5-34**. • Do not use an EIP. In this case, this parameter is unavailable. • Automatically assign an EIP. You need to specify the information about the new EIP.

Parameter	Mandatory	Type	Description

user_data	No	String	Specifies the user data to be injected during the ECS creation process. Text, text files, and gzip files can be injected.
			Constraints:
			• The content to be injected must be encoded with base64. The maximum size of the content to be injected (before encoding) is 32 KB.
			• If **key_name** is not specified, the data injected by **user_data** is the password of user **root** for logging in to the ECS by default.
			• This parameter is mandatory when you create a Linux ECS using the password authentication mode. Its value is the initial user **root** password.
			Password complexity requirements:
			• Consists of 8 to 26 characters.
			• Contains at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters (!@$ %^-_=+[{}]:,./?).
			Examples:
			• Use a plaintext password (risky in security), for example, **Cloud.1234**.
			`#! /bin/bash`
			`echo 'root:Cloud.1234' | chpasswd ;`
			• Use a ciphertext password (recommended)
			`#! /bin/bash`
			`echo 'root:$6$V6azyeLwcD3CHlpY $BN3VVq18fmCkj66B4zdHLWevqcxli g' | chpasswd -e`
			In the preceding command output, **6V6azyeLwcD3CHlpY**

Parameter	Mandatory	Type	Description

			$BN3VVq18fmCkj66B4zdHLWevqcxlig is the ciphertext password, which can be generated as follows:
			1. Generate an encrypted salt value.
			`[root@test linux]# python -c "import crypt, getpass, pwd;print crypt.mksalt()" $6$V6azyeLwcD3CHlpY`
			2. Generate a ciphertext password based on the salt value.
			`[root@test linux]# python -c "import crypt, getpass, pwd;print crypt.crypt('Cloud.1234','\$6\$V6azyeLwcD3CHlpY')" $6$V6azyeLwcD3CHlpY $BN3VVq18fmCkj66B4zdHLWevqcxlig`
			Examples:
			• Linux
			`#! /bin/bash echo user_test >> /home/user.txt`
			• Windows
			`rem cmd echo 111 > c:\aaa.txt`
			NOTE
			Data injection is not supported for ECSs that use a Linux image and the password login mode.

metadata	No	Object	Specifies the ECS metadata. For details, see **Table 5-37**. **NOTE** • This parameter is mandatory when a Windows ECS with password authentication is created. • This parameter does not allow users to write data. It is mandatory when the ECS is to be created using a Windows image.

Parameter	Mandatory	Type	Description
security_groups	No	Array	Specifies security groups. For details, see **Table 5-38**. If the security group is specified both in the AS configuration and AS group, the security group specified in the AS configuration prevails. If the security group is not specified in either of them, the default security group is used. For your convenience, you are advised to specify the security group in the AS configuration.
server_group_id	No	String	Specifies the ECS group ID.
tenancy	No	String	Specifies that ECSs are created on DeHs. Options: • **dedicated**: Specifies that ECSs are created on DeHs. • This parameter is not specified.
dedicated_host_id	No	String	Specifies the ID of a DeH. **NOTE** • This parameter is valid only when **tenancy** is set to **dedicated**. • If this parameter is specified, ECSs will be created on a specified DeH. • If this parameter is not specified, the system automatically selects the DeH with the maximum available memory size from the DeHs that meet specifications requirements to create the ECSs, thereby balancing load of the DeHs.

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. • **PICK_FIRST** (default): When an ECS is added for capacity expansion, the target flavor is determined in the order in the **flavorRef** list. • **COST_FIRST**: When an ECS is added for capacity expansion, the target flavor is determined for minimal expenses.
market_type	No	String	Specifies a billing mode for an ECS. The options are as follows: • **Pay-per-use**, which is not specified • **Spot pricing**

NOTE

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

Table 5-31 disk field description

Parameter	Mandatory	Type	Description
size	Yes	Integer	Specifies the disk size. The unit is GB. The system disk size ranges from 40 to 1024 and must be greater than or equal to the minimum size (**min_disk** value) of the system disk specified in the image. The data disk size ranges from 10 to 32768.

Parameter	Mandatory	Type	Description
volume_type	Yes	String	Specifies the ECS system disk type. The disk type must match the available disk type. • **SATA**: common I/O disk type • **SAS**: high I/O disk type • **SSD**: ultra-high I/O disk type • **co-p1**: high I/O (performance-optimized I) disk type • **uh-l1**: ultra-high I/O (latency-optimized) disk type **NOTE** For HANA, HL1, and HL2 ECSs, use co-p1 and uh-l1 disks. For other ECSs, do not use co-p1 or uh-l1 disks.
disk_type	Yes	String	Specifies a disk type. The options are as follows: • **DATA**: indicates a data disk. • **SYS**: indicates a system disk. **NOTE** System disk encryption is not supported.
dedicated_storage_id	No	String	Specifies a DSS device ID for creating an ECS disk. **NOTE** Specify DSS devices for all disks in an AS configuration or not. If DSS devices are specified, all the data stores must belong to the same AZ, and the disk types supported by a DSS device for a disk must be the same as the **volume_type** value.
data_disk_image_id	No	String	Specifies the ID of a data disk image used to export data disks of an ECS.

Parameter	Mandatory	Type	Description
snapshot_id	No	String	Specifies the disk backup snapshot ID for restoring the system disk and data disks using a full-ECS backup when a full-ECS image is used. **NOTE** Each disk in an AS configuration must correspond to a disk backup in the full-ECS backup by **snapshot_id**.
metadata	No	Object	Specifies the metadata for creating disks. For details, see **Table 5-32**.

Table 5-32 metadata Field Description for Creating Disks

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

Table 5-33 personality field description

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

Table 5-34 public_ip field description

Parameter	Mandatory	Type	Description
eip	Yes	Object	Specifies the EIP automatically assigned to the ECS. For details, see **Table 5-35**.

Table 5-35 eip field description

Parameter	Mandatory	Type	Description
ip_type	Yes	String	Specifies the EIP type. Enumerated values of the IP address type: • **5_bgp**: indicates the dynamic BGP. • **5_sbgp**: indicates the static BGP. • **5_telcom**: indicates China Telecom. • **5_union**: indicates China Unicom.
bandwidth	Yes	Object	Specifies the bandwidth of an IP address. For details, see **Table 5-36**.

Table 5-36 bandwidth field description

Parameter	Mandatory	Type	Description
size	No	Integer	Specifies the bandwidth (Mbit/s). The value range for bandwidth billed based on the duration is **1** to **2000** and that for bandwidth billed based on the amount of data used is **1** to **300** **NOTE** • If **share_type** is set to **PER**, this parameter is mandatory. If **share_type** is set to **WHOLE**, this parameter is invalid. • The specific range may vary depending on the configuration in each region. You can see the bandwidth range of each region on the management console. • The minimum unit for bandwidth varies depending on the bandwidth range. • The minimum unit is 1 Mbit/s if the allowed bandwidth size ranges from 0 to 300 Mbit/s (with 300 Mbit/s included).

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

Table 5-37 metadata field description

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

Table 5-38 security_groups field description

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

- Example request

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

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

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



```
    "key_name": "100vm_key" ,
  "security_groups": [{
    "id": "6c22a6c0-b5d2-4a84-ac56-51090dcc33be"
  }],
    "multi_flavor_priority_policy": "PICK_FIRST"
  }
}
```

Response Message

- Response parameters

  Table 5-39 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 so that the request can be processed.
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**.

5.2.2 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 5-40 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_configuration_name	No	String	Specifies the AS configuration name. Supports fuzzy search.

Parameter	Mandatory	Type	Description
image_id	No	String	Specifies the image ID. It is same as **imageRef**.
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum parameter value is **0**.
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value range is 0 to 100.

Request Message

- Request parameters

  None

- Example request

  This example shows how to query 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 Message

- Response parameters

Table 5-41 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	Specifies the AS configuration list.

Table 5-42 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	Object	Specifies the information about instance configurations.
create_time	String	Specifies the time when AS configurations are created. The time format complies with UTC.

Table 5-43 instance_config field description

Parameter	Type	Description
flavorRef	String	Specifies the ECS flavor ID.
imageRef	String	Specifies the image ID. It is same as **image_id**.
disk	Array	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.
instance_id	String	This parameter is reserved.
adminPass	String	This parameter is reserved.
personality	Array	Specifies information about the injected file.
public_ip	Object	Specifies the EIP of the ECS.
user_data	String	Specifies the Cloud-Init user data, which is encoded using Base64.
metadata	Object	Specifies the ECS metadata. For details, see **Table 5-50**.
security_groups	Array	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.

Parameter	Type	Description
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 5-44 disk field description

Parameter	Type	Description
size	Integer	Specifies the disk size. The unit is GB.
volume_type	String	Specifies the disk type.
disk_type	String	Specifies whether the disk is a system disk or a data disk. **DATA** indicates a data disk. **SYS** indicates a system disk.
dedicated_storage_id	String	Specifies the ID of the DSS device for the disk.
data_disk_image_id	String	Specifies the ID of the data disk image for creating a data disk.
snapshot_id	String	Specifies the disk backup snapshot ID.
metadata	Object	Specifies the metadata for creating disks. For details, see **Table 5-45**.

Table 5-45 metadata Field Description for Creating Disks

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

Table 5-46 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 5-47 public_ip field description

Parameter	Type	Description
eip	Object	Specifies the automatically assigned EIP.

Table 5-48 eip field description

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

Table 5-49 bandwidth field description

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

Table 5-50 metadata field description

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

Table 5-51 security_groups field description

Parameter	Type	Description
id	String	Specifies the security group ID.

- Example response

```
{
    "limit": 20,
    "total_number": 2,
    "start_number": 0,
    "scaling_configurations": [
        {
            "tenant": "ce061903a53545dcaddb300093b477d2",
            "scaling_configuration_id": "6afe46f9-7d3d-4046-8748-3b2a1085ad86",
            "scaling_configuration_name": " config_name_1",
            "instance_config": {
                "disk": [
                    {
                        "size": 40,
                        "volume_type": "SATA",
                        "disk_type": "SYS"
                    },
                    {
                        "size": 100,
                        "volume_type": "SATA",
                        "disk_type": "DATA"
                    }
                ],
                "personality": null,
                "instance_name": null,
                "instance_id": null,
                "flavorRef": "103",
                "imageRef": "37ca2b35-6fc7-47ab-93c7-900324809c5c",
                "key_name": "keypair01",
                "public_ip": null,
                "user_data": null,
                "metadate": {},
                "security_groups": [{
                    "id": "6c22a6c0-b5d2-4a84-ac56-51090dcc33be"
                }],
            },
            "create_time": "2015-07-23T01:04:07Z"
        },
        {
            "tenant": "ce061903a53545dcaddb300093b477d2",
            "scaling_configuration_id": "24a8c5f3-c713-4aba-ac29-c17101009e5d",
            "scaling_configuration_name": "config_name_2",
            "instance_config": {
                "disk": [
                    {
                        "size": 40,
                        "volume_type": "SATA",
                        "disk_type": "SYS"
                    }
                ],
```



```
            "personality": null,
            "instance_name": null,
            "instance_id": null,
            "flavorRef": "103",
            "imageRef": "37ca2b35-6fc7-47ab-93c7-900324809c5c",
            "key_name": "keypair01",
            "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 so that 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 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**.

5.2.3 Querying AS Configuration Details

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 5-52 Parameter description

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

Request Message

- Request parameters

  None

- Example request

  This example shows how to query 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 Message

- Response parameters

Table 5-53 Response parameters

Parameter	Type	Description
scaling_configuration	Object	Provides AS configuration details.

Table 5-54 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	Object	Specifies the information about instance configurations.
create_time	String	Specifies the time when AS configurations are created. The time format complies with UTC.

Table 5-55 instance_config field description

Parameter	Type	Description
flavorRef	String	Specifies the ECS flavor ID.
imageRef	String	Specifies the image ID. It is same as **image_id**.
disk	Array	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.
instance_id	String	This parameter is reserved.
adminPass	String	This parameter is reserved.
personality	Array	Specifies information about the injected file.
public_ip	Object	Specifies the EIP of the ECS.
user_data	String	Specifies the Cloud-Init user data, which is encoded using Base64.

Parameter	Type	Description
metadata	Object	Specifies the ECS metadata. For details, see Table 5-50.
security_groups	Array	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 5-56 disk field description

Parameter	Type	Description
size	Integer	Specifies the disk size. The unit is GB.
volume_type	String	Specifies the disk type.
disk_type	String	Specifies whether the disk is a system disk or a data disk. **DATA** indicates a data disk. **SYS** indicates a system disk.
dedicated_storage_id	String	Specifies the ID of the DSS device for the disk.
data_disk_image_id	String	Specifies the ID of the data disk image for creating a data disk.
snapshot_id	String	Specifies the disk backup snapshot ID.
metadata	Object	Specifies the metadata for creating disks. For details, see Table 5-45.

Table 5-57 personality field description

Parameter	Type	Description
path	String	Specifies the path of the injected file.

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

Table 5-58 public_ip field description

Parameter	Type	Description
eip	Object	Specifies the automatically assigned EIP.

Table 5-59 eip field description

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

Table 5-60 bandwidth field description

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

Table 5-61 metadata field description

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

Table 5-62 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",
         "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.

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

Error Codes

See **Error Codes**.

5.2.4 Deleting an AS Configuration

Function

This interface is used to delete a specified AS configuration.

NOTE

AS configurations used by AS groups cannot be deleted.

URI

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

Table 5-63 Parameter description

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

Request Message

- Request parameters

  None

- Example request

  This example shows how to delete 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 Message

- Response parameters

  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.

Returned Value	Description
407 Proxy Authentication Required	You must use the proxy server for authentication so that 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 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 5-64 Parameter description

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

Request Message

- Request parameters

  Table 5-65 Request parameters

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

- Example request

  This example shows how to delete 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 Message

- Response parameters

  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 so that 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 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 in an AS Group

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 5-66 Parameter description

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

Parameter	Mandatory	Type	Description
protect_from_scaling_down	No	String	Specifies the instance protection status. • **true**: Instance protection is enabled. • **false**: Instance protection is disabled.
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum parameter value is **0**.
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value range is 0 to 100.

Request Message

- Request parameters

  None

- 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/{project_id}/scaling_group_instance/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/list?life_cycle_state=INSERVICE&health_status=NORMAL
  ```

Response Message

- Response parameters

  Table 5-67 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	Specifies details about the instances in the AS group.

Table 5-68 scaling_group_instances field description

Parameter	Type	Description
instance_id	String	Specifies the instance ID.
instance_name	String	Specifies the instance name.
scaling_group_id	String	Specifies the ID of the AS group to which the instance belongs.
scaling_group_name	String	Specifies the name of the AS group to which the instance belongs. Supports fuzzy search.
life_cycle_state	String	Specifies the instance lifecycle status in the AS group. • **INSERVICE**: The instance is enabled. • **PENDING**: The instance is being added to the AS group. • **PENDING_WAIT**: The instance is waiting to be added to the AS group. • **REMOVING**: The instance is being removed from the AS group. • **REMOVING_WAIT**: The instance is waiting to be removed from the AS group. • **STANDBY**: The instance is in standby state. • **ENTERING_STANDBY**: The instance is entering the standby state.
health_status	String	Specifies the instance health status. • **INITIALIZING**: The instance is being initialized. • **NORMAL**: The instance is functional. • **ERROR**: The instance is faulty.
scaling_configuration_name	String	Specifies the AS configuration name.
scaling_configuration_id	String	Specifies the AS configuration ID. If the returned value is not empty, the instance is an ECS automatically created in a scaling action. If the returned value is empty, the instance is an ECS manually added to the AS group.

Parameter	Type	Description
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.

Returned Value	Description
407 Proxy Authentication Required	You must use the proxy server for authentication so that 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 of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.3.2 Removing a Specified 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.

URI

DELETE /autoscaling-api/v1/{project_id}/scaling_group_instance/{instance_id}?instance_delete=yes

Table 5-69 Parameter description

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

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

Request Message

- Request parameters

  None

- Example request

  This example shows how to remove but not delete the instance with ID **b25c1589-c96c-465b-9fef-d06540d1945c** from an AS group.

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

Response Message

- Response parameters

  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 so that 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 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 Performing Operations on Instances in Batches

Function

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

NOTE

- A batch operation 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 5-70 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 Message

- Request parameters

Table 5-71 Request parameters

Parameter	Mandatory	Type	Description
instances_id	Yes	Array	Specifies the ECS ID.

Parameter	Mandatory	Type	Description
instance_delete	No	String	Specifies whether to delete an instance when it is removed from an AS group. Options: • **no** (default): The instance will not be deleted. • **yes**: The instance will be deleted. This parameter takes effect only when the **action** is set to **REMOVE**.
instance_append	No	String	Specifies whether to add new instances when certain existing instances enter standby mode. Options: • **no** (default): No new instances will be added. • **yes**: New instances will be added. This parameter takes effect only when **action** is set to **ENTER_STANDBY**.
action	Yes	String	Specifies an action to be performed on instances in batches. The options are as follows: • **ADD**: adds instances to the AS group. • **REMOVE**: removes instances from the AS group. • **PROTECT**: enables instance protection. • **UNPROTECT**: disables instance protection. • **ENTER_STANDBY**: sets instances to standby mode. • **EXIT_STANDBY**: cancels standby mode for instances.

- Example request

  This example 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/{project_id}/scaling_group_instance/e5d27f5c-dd76-4a61-b4bc-a67c5686719a/action

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

Response Message

- Response parameters

  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 so that the request can be processed.
408 Request Timeout	The request timed out.

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

Error Codes

See **Error Codes**.

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 5-72 Parameter description

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

Request Message

- Request parameters

Table 5-73 Request parameters

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

Parameter	Mandatory	Type	Description
alarm_id	No	String	Specifies the alarm rule ID. This parameter is mandatory when **scaling_policy_type** is set to **ALARM**. After this parameter is specified, the value of **scheduled_policy** does not take effect. After you create an alarm policy, the system automatically adds an alarm triggering activity of the autoscaling type to the **alarm_actions** field in the alarm rule specified by the parameter value.
scheduled_policy	No	Object	Specifies the periodic or scheduled AS policy. This parameter is mandatory when **scaling_policy_type** is set to **SCHEDULED** or **RECURRENCE**. After this parameter is specified, the value of **alarm_id** does not take effect. For details, see **Table 5-74**.
scaling_policy_action	No	Object	Specifies the scaling action of the AS policy. For details, see **Table 5-75**.
cool_down_time	No	Integer	Specifies the cooldown period (in seconds). The value ranges from 0 to 86400 and is 300 by default.

Table 5-74 scheduled_policy field description

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

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

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

Table 5-75 scaling_policy_action field description

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

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

- Example request

  This example 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/{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 Message

- Response parameters

  Table 5-76 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 so that 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 of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.2 Creating an AS Policy (V2)

Function

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

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

URI

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

Table 5-77 Parameter description

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

Request Message

- Request parameters

Table 5-78 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_resource_id	Yes	String	Specifies the scaling resource ID, which is the unique ID of an AS group or bandwidth. • If **scaling_resource_type** is set to **SCALING_GROUP**, this parameter indicates the unique AS group ID. • If **scaling_resource_type** is set to **BANDWIDTH**, this parameter indicates the unique bandwidth ID. **NOTE** AS cannot scale yearly/monthly bandwidths.

Parameter	Mandatory	Type	Description
scaling_resource_type	Yes	String	Specifies the scaling resource type. • AS group: **SCALING_GROUP** • Bandwidth: **BANDWIDTH**
scaling_policy_type	Yes	String	Specifies the AS policy type. • **ALARM** (corresponding to **alarm_id**): indicates that the scaling action is triggered by an alarm. • **SCHEDULED** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered as scheduled. • **RECURRENCE** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered periodically.
alarm_id	No	String	Specifies the alarm rule ID. This parameter is mandatory when **scaling_policy_type** is set to **ALARM**. After this parameter is specified, the value of **scheduled_policy** does not take effect. After you create an alarm policy, the system automatically adds an alarm triggering activity of the autoscaling type to the **alarm_actions** field in the alarm rule specified by the parameter value. You can obtain the parameter value by querying Cloud Eye alarm rules.
scheduled_policy	No	Object	Specifies the periodic or scheduled AS policy. This parameter is mandatory when **scaling_policy_type** is set to **SCHEDULED** or **RECURRENCE**. After this parameter is specified, the value of **alarm_id** does not take effect. For details, see **Table 5-79**.

Parameter	Mandatory	Type	Description
scaling_policy_action	No	Object	Specifies the scaling action of the AS policy. For details, see **Table 5-80**.
cool_down_time	No	Integer	Specifies the cooldown period (in seconds). The value ranges from 0 to 86400 and is 300 by default.

Table 5-79 scheduled_policy field description

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

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

Table 5-80 scaling_policy_action field description

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

Parameter	Mandatory	Type	Description
size	No	Integer	Specifies the operation size. The value is an integer from 0 to 300. The default value is **1**. This parameter can be set to **0** only when **operation** is set to **SET**. • If **scaling_resource_type** is set to **SCALING_GROUP**, this parameter indicates the number of instances. The value is an integer from 0 to 300 and the default value is **1**. • If **scaling_resource_type** is set to **BANDWIDTH**, this parameter indicates the bandwidth (Mbit/s). The value is an integer from 1 to 300 and the default value is **1**. • If **scaling_resource_type** is set to **SCALING_GROUP**, either **size** or **percentage** can be set.
percentage	No	Integer	Specifies the percentage of instances to be operated. If **operation** is set to **ADD**, **REMOVE**, or **REDUCE**, the value of this parameter is an integer from 1 to 20000. If **operation** is set to **SET**, the value is an integer from 0 to 20000. • If **scaling_resource_type** is set to **SCALING_GROUP**, either **size** or **percentage** can be set. If neither **size** nor **percentage** is set, the default value of **size** is **1**. • If **scaling_resource_type** is set to **BANDWIDTH**, **percentage** is unavailable.

Parameter	Mandatory	Type	Description
limits	No	Integer	Specifies the operation restrictions. If **scaling_resource_type** is set to **BANDWIDTH** and **operation** is not **SET**, this parameter takes effect and the unit is Mbit/s. • If **operation** is set to **ADD**, this parameter indicates the maximum bandwidth allowed. • If **operation** is set to **REDUCE**, this parameter indicates the minimum bandwidth allowed.

- Example request

  This example shows how to create an alarm policy named **hth_aspolicy_1** with the following configurations: The alarm rule ID is **al1513822380493GvlJKZwA8**; when the alarm threshold is reached according to the alarm rule, the bandwidth with ID **8ade64b5-d685-40b8-8582-4ce306ea37a6** will be increased by 1 Mbit/s until the bandwidth reaches 10 Mbit/s.

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

{
   "alarm_id": "al1513822380493GvlJKZwA8",
   "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 Message

- Response parameters

  Table 5-81 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 so that 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 of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.3 Modifying an AS Policy

Function

This API is used to modify a specified AS policy.

URI

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

Table 5-82 Parameter description

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

Request Message

- Request parameters

Table 5-83 Request parameters

Parameter	Mandatory	Type	Description
scaling_policy_name	No	String	Specifies the AS policy name. The name contains only letters, digits, underscores (_), and hyphens (-), and cannot exceed 64 characters.
scaling_policy_type	No	String	Specifies the AS policy type. • **ALARM** (corresponding to **alarm_id**): indicates that the scaling action is triggered by an alarm. • **SCHEDULED** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered as scheduled. • **RECURRENCE** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered periodically.

Parameter	Mandatory	Type	Description
alarm_id	No	String	Specifies the alarm rule ID. This parameter is mandatory when **scaling_policy_type** is set to **ALARM**. After this parameter is specified, the value of **scheduled_policy** does not take effect. After you modify an alarm policy, the system automatically adds an alarm triggering activity of the autoscaling type to the **alarm_actions** field in the alarm rule specified by the parameter value. You can obtain the parameter value by querying Cloud Eye alarm rules.
scheduled_policy	No	Object	Specifies the periodic or scheduled AS policy. This parameter is mandatory when **scaling_policy_type** is set to **SCHEDULED** or **RECURRENCE**. After this parameter is specified, the value of **alarm_id** does not take effect. For details, see **Table 5-84**.
scaling_policy_action	No	Object	Specifies the scaling action of the AS policy. For details, see **Table 5-85**.
cool_down_time	No	Integer	Specifies the cooldown period (in seconds). The value ranges from 0 to 86400.

Table 5-84 scheduled_policy field description

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

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

Table 5-85 scaling_policy_action field description

Parameter	Mandatory	Type	Description
operation	No	String	Specifies the operation to be performed. The default operation is **ADD**. • **ADD**: adds specified number of instances to the AS group. • **REMOVE/REDUCE**: removes or reduces specified number of instances from the AS group. • **SET**: sets the number of instances in the AS group.

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

- Example request

  This example shows how to modify 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 modification is executed at 16:00 every day from 2016-01-08T17:31Z through 2016-02-08T17:31Z.

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

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



```
    "instance_number": 2
  }
}
```

Response Message

- 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 so that 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 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**.

5.4.4 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 5-86 Parameter description

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

Request Message

- Request parameters

Table 5-87 Request parameters

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

Parameter	Mandatory	Type	Description
scaling_policy_type	No	String	Specifies the AS policy type. • **ALARM** (corresponding to **alarm_id**): indicates that the scaling action is triggered by an alarm. • **SCHEDULED** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered as scheduled. • **RECURRENCE** (corresponding to **scheduled_policy**): indicates that the scaling action is triggered periodically.
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. • AS group: **SCALING_GROUP** • Bandwidth: **BANDWIDTH**
alarm_id	No	String	Specifies the alarm rule ID. This parameter is mandatory when **scaling_policy_type** is set to **ALARM**. After this parameter is specified, the value of **scheduled_policy** does not take effect. After you modify an alarm policy, the system automatically adds an alarm triggering activity of the autoscaling type to the **alarm_actions** field in the alarm rule specified by the parameter value. You can obtain the parameter value by querying Cloud Eye alarm rules.

Parameter	Mandatory	Type	Description
scheduled_policy	No	Object	Specifies the periodic or scheduled AS policy. This parameter is mandatory when **scaling_policy_type** is set to **SCHEDULED** or **RECURRENCE**. After this parameter is specified, the value of **alarm_id** does not take effect. For details, see **Table 5-88**.
scaling_policy_action	No	Object	Specifies the scaling action of the AS policy. For details, see **Table 5-89**.
cool_down_time	No	Integer	Specifies the cooldown period (in seconds). The value ranges from 0 to 86400.

Table 5-88 scheduled_policy field description

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

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

Table 5-89 scaling_policy_action field description

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

Parameter	Mandatory	Type	Description
size	No	Integer	Specifies the operation size. The value is an integer from 0 to 300. The default value is **1**. This parameter can be set to **0** only when **operation** is set to **SET**. • If **scaling_resource_type** is set to **SCALING_GROUP**, this parameter indicates the number of instances. The value is an integer from 0 to 300 and the default value is **1**. • If **scaling_resource_type** is set to **BANDWIDTH**, this parameter indicates the bandwidth (Mbit/s). The value is an integer from 1 to 300 and the default value is **1**. • If **scaling_resource_type** is set to **SCALING_GROUP**, either **size** or **percentage** can be set.
percentage	No	Integer	Specifies the percentage of instances to be operated. If **operation** is set to **ADD**, **REMOVE**, or **REDUCE**, the value of this parameter is an integer from 1 to 20000. If **operation** is set to **SET**, the value is an integer from 0 to 20000. • If **scaling_resource_type** is set to **SCALING_GROUP**, either **size** or **percentage** can be set. If neither **size** nor **percentage** is set, the default value of **size** is **1**. • If **scaling_resource_type** is set to **BANDWIDTH**, **percentage** is unavailable.

Parameter	Mandatory	Type	Description
limits	No	Integer	Specifies the operation restrictions. If **scaling_resource_type** is set to **BANDWIDTH** and **operation** is not **SET**, this parameter takes effect and the unit is Mbit/s. • If **operation** is set to **ADD**, this parameter indicates the maximum bandwidth allowed. • If **operation** is set to **REDUCE**, this parameter indicates the minimum bandwidth allowed.

- Example request

  This example shows how to modify an AS policy with ID **0h327883-324n-4dzd-9c61-68d03ee191dd**. The modification is as follows: The AS policy name is changed to **hth_aspolicy_1**; the alarm ID is changed to **al1513822380493GvlJKZwA8**; the cooldown period is changed to 900 seconds; the policy execution action is to add a bandwidth of 1 Mbit/s until the bandwidth reaches 10 Mbit/s.

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

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

Response Message

- Response parameters

  Table 5-90 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 so that 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 of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.4.5 Querying AS Policies

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 5-91 Parameter description

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

Request Message

- Request parameters

  None

- Example request

  This example shows how to query scheduled AS policies named **as-policy-test** in 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 Message

- Response parameters

Table 5-92 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	Specifies scaling policies. For details, see **Table 5-93**.

Table 5-93 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. • **INSERVICE**: The AS policy is enabled. • **PAUSED**: The AS policy is disabled. • **EXECUTING**: The AS policy is being executed.

Parameter	Type	Description
scaling_policy_type	String	Specifies the AS policy type. • **ALARM**: indicates that the scaling action is triggered by an alarm. A value is returned for **alarm_id**, and no value is returned for **scheduled_policy**. • **SCHEDULED**: indicates that the scaling action is triggered as scheduled. A value is returned for **scheduled_policy**, and no value is returned for **alarm_id**, **recurrence_type**, **recurrence_value**, **start_time**, or **end_time**. • **RECURRENCE**: indicates that the scaling action is triggered periodically. Values are returned for **scheduled_policy**, **recurrence_type**, **recurrence_value**, **start_time**, and **end_time**, and no value is returned for **alarm_id**.
alarm_id	String	Specifies the alarm ID.
scheduled_policy	Object	Specifies the periodic or scheduled AS policy. For details, see **Table 5-94**.
scaling_policy_action	Object	Specifies the scaling action of the AS policy. For details, see **Table 5-95**.
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 5-94 scheduled_policy field description

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

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

Table 5-95 scaling_policy_action field description

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

- Example response

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

Returned Value

- Normal

  200

- Abnormal

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

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 so that 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 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 (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 5-96 Parameter description

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

Request Message

- Request parameters

  None

- Example request

  This example shows how to query all periodic AS policies for resources 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 Message

- Response parameters

Table 5-97 Response parameters

Parameter	Type	Description
total_number	Integer	Specifies the total number of query records.
start_number	Integer	Specifies the start line number.
limit	Integer	Specifies the maximum number of resources to be queried.
scaling_policies	Array	Specifies AS policies. For details, see **Table 5-98**.

Table 5-98 scaling_policies field description

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

Parameter	Type	Description
scaling_policy_type	String	Specifies the AS policy type. • **ALARM**: indicates that the scaling action is triggered by an alarm. A value is returned for **alarm_id**, and no value is returned for **scheduled_policy**. • **SCHEDULED**: indicates that the scaling action is triggered as scheduled. A value is returned for **scheduled_policy**, and no value is returned for **alarm_id**, **recurrence_type**, **recurrence_value**, **start_time**, or **end_time**. • **RECURRENCE**: indicates that the scaling action is triggered periodically. Values are returned for **scheduled_policy**, **recurrence_type**, **recurrence_value**, **start_time**, and **end_time**, and no value is returned for **alarm_id**.
alarm_id	String	Specifies the alarm ID.
scheduled_policy	Object	Specifies the periodic or scheduled AS policy. For details, see **Table 5-99**.
scaling_policy_action	Object	Specifies the scaling action of the AS policy. For details, see **Table 5-100**.
cool_down_time	Integer	Specifies the cooldown period (s).
create_time	String	Specifies the time when an AS policy was created. The time format complies with UTC.
meta_data	Object	Provides additional information. For details, see **Table 5-101**.

Table 5-99 scheduled_policy field description

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

Table 5-100 scaling_policy_action field description

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

Table 5-101 meta_data field description

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

- Example response

```
{
    "limit": 20,
    "total_number": 3,
    "start_number": 0,
    "scaling_policies": [
        {
            "scaling_policy_id": "803a35a5-38fb-4d27-a042-496c14bc1fb8",
            "scaling_policy_name": "as-policy-7a75",
            "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
            "scaling_resource_type": "SCALING_GROUP",
            "scaling_policy_type": "RECURRENCE",
            "scheduled_policy": {
                "launch_time": "03:30",
                "recurrence_type": "Daily",
                "start_time": "2017-08-28T03:08Z",
                "end_time": "2017-09-01T03:08Z"
            },
            "cool_down_time": 900,
            "scaling_policy_action": {
                "operation": "ADD",
                "size": 1
            },
            "policy_status": "INSERVICE",
            "create_time": "2017-08-31T03:02:41Z"
        },
```



```
    {
        "scaling_policy_id": "535fd67e-276b-409c-879e-52f4e09e14bb",
        "scaling_policy_name": "as-policy-7a75",
        "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
        "scaling_resource_type": "SCALING_GROUP",
        "scaling_policy_type": "RECURRENCE",
        "scheduled_policy": {
            "launch_time": "21:30",
            "recurrence_type": "Daily",
            "start_time": "2017-08-27T21:08Z",
            "end_time": "2017-08-31T21:08Z"
        },
        "cool_down_time": 900,
        "scaling_policy_action": {
            "operation": "ADD",
            "size": 1
        },
        "policy_status": "INSERVICE",
        "create_time": "2017-08-31T07:35:05Z"
    },
    {
        "scaling_policy_id": "37df92f8-73cb-469e-a420-c15f445d2ee1",
        "scaling_policy_name": "as-policy-7a75",
        "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
        "scaling_resource_type": "SCALING_GROUP",
        "scaling_policy_type": "RECURRENCE",
        "scheduled_policy": {
            "launch_time": "22:30",
            "recurrence_type": "Daily",
            "start_time": "2017-08-27T22:08Z",
            "end_time": "2017-08-31T22:08Z"
        },
        "cool_down_time": 900,
        "scaling_policy_action": {
            "operation": "ADD",
            "size": 1
        },
        "policy_status": "INSERVICE",
        "create_time": "2017-08-31T07:41:06Z"
    }
  ]
}
```


Returned Values

- Normal

  200

- Abnormal

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

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 so that 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 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 All AS Policies (V2)

Function

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

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

URI

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

NOTE

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

Table 5-102 Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
scaling_resource_id	No	String	Specifies the scaling resource ID.
scaling_resource_type	No	String	Specifies the scaling resource type. • AS group: **SCALING_GROUP** • Bandwidth: **BANDWIDTH**
scaling_policy_name	No	String	Specifies the AS policy name. Supports fuzzy search.
scaling_policy_id	No	String	Specifies the AS policy ID.
scaling_policy_type	No	String	Specifies the AS policy type. • **ALARM**: alarm policy • **SCHEDULED**: scheduled policy • **RECURRENCE**: periodic policy
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum parameter value is **0**.
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value range is 0 to 100.
sort_by	No	String	Specifies the sorting method. • **POLICY_NAME**: AS policies are sorted by name. • **TRIGGER_CONDITION**: AS policies are sorted by trigger condition. For example, in ascending order, alarm policies are first, and others are sorted in ascending order based on the latest triggering time. • **CREATE_TIME**: AS policies are sorted based on the creation time.

Parameter	Mandatory	Type	Description
order	No	String	Specifies the sorting order. • **ASC**: ascending order • **DESC**: descending order
alarm_id	No	String	Specifies the alarm rule ID.

Request Message

- Request parameters

  None

- Example request

  This example shows how to query all periodic AS policies for resources 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 Message

- Response parameters

Table 5-103 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	Specifies AS policies. For details, see **Table 5-104**.

Table 5-104 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.

Parameter	Type	Description
scaling_resource_type	String	Specifies the scaling resource type. • AS group: **SCALING_GROUP** • Bandwidth: **BANDWIDTH**
policy_status	String	Specifies the AS policy status. • **INSERVICE**: The AS policy is enabled. • **PAUSED**: The AS policy is disabled. • **EXECUTING**: The AS policy is being executed.
scaling_policy_type	String	Specifies the AS policy type. • **ALARM**: indicates that the scaling action is triggered by an alarm. A value is returned for **alarm_id**, and no value is returned for **scheduled_policy**. • **SCHEDULED**: indicates that the scaling action is triggered as scheduled. A value is returned for **scheduled_policy**, and no value is returned for **alarm_id**, **recurrence_type**, **recurrence_value**, **start_time**, or **end_time**. • **RECURRENCE**: indicates that the scaling action is triggered periodically. Values are returned for **scheduled_policy**, **recurrence_type**, **recurrence_value**, **start_time**, and **end_time**, and no value is returned for **alarm_id**.
alarm_id	String	Specifies the alarm ID.
scheduled_policy	Object	Specifies the periodic or scheduled AS policy. For details, see **Table 5-105**.
scaling_policy_action	Object	Specifies the scaling action of the AS policy. For details, see **Table 5-106**.
		Specifies the scaling action applied when **scaling_policy_type** is set to **INTERVAL_ALARM**. For details, see #as_06_0407/table820663710439.
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	Object	Provides additional information. For details, see **Table 5-107**.

Table 5-105 scheduled_policy field description

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

Table 5-106 scaling_policy_action field description

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

Table 5-107 meta_data field description

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

- Example response

```
{
    "limit": 20,
    "total_number": 3,
    "start_number": 0,
    "scaling_policies": [
        {
            "scaling_policy_id": "803a35a5-38fb-4d27-a042-496c14bc1fb8",
            "scaling_policy_name": "as-policy-7a75",
            "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
            "scaling_resource_type": "SCALING_GROUP",
            "scaling_policy_type": "RECURRENCE",
            "scheduled_policy": {
                "launch_time": "03:30",
                "recurrence_type": "Daily",
                "start_time": "2017-08-28T03:08Z",
                "end_time": "2017-09-01T03:08Z"
            },
            "cool_down_time": 900,
            "scaling_policy_action": {
                "operation": "ADD",
                "size": 1
            },
            "policy_status": "INSERVICE",
            "create_time": "2017-08-31T03:02:41Z"
        },
```



```
    {
        "scaling_policy_id": "535fd67e-276b-409c-879e-52f4e09e14bb",
        "scaling_policy_name": "as-policy-7a75",
        "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
        "scaling_resource_type": "SCALING_GROUP",
        "scaling_policy_type": "RECURRENCE",
        "scheduled_policy": {
            "launch_time": "21:30",
            "recurrence_type": "Daily",
            "start_time": "2017-08-27T21:08Z",
            "end_time": "2017-08-31T21:08Z"
        },
        "cool_down_time": 900,
        "scaling_policy_action": {
            "operation": "ADD",
            "size": 1
        },
        "policy_status": "INSERVICE",
        "create_time": "2017-08-31T07:35:05Z",
"meta_data": {
            "metadata_eip_id": "263f0886-de6a-4e21-ad83-814ca9f3844e",
            "metadata_eip_address": "255.255.255.255"
        }
    },
    {
        "scaling_policy_id": "37df92f8-73cb-469e-a420-c15f445d2ee1",
        "scaling_policy_name": "as-policy-7a75",
        "scaling_resource_id": "8ade64b5-d685-40b8-8582-4ce306ea37a6",
        "scaling_resource_type": "SCALING_GROUP",
        "scaling_policy_type": "RECURRENCE",
        "scheduled_policy": {
            "launch_time": "22:30",
            "recurrence_type": "Daily",
            "start_time": "2017-08-27T22:08Z",
            "end_time": "2017-08-31T22:08Z"
        },
        "cool_down_time": 900,
        "scaling_policy_action": {
            "operation": "ADD",
            "size": 1
        },
        "policy_status": "INSERVICE",
        "create_time": "2017-08-31T07:41:06Z",
"meta_data": {
            "metadata_eip_id": "263f0886-de6a-4e21-ad83-814ca9f3844e",
            "metadata_eip_address": "255.255.255.255"
        }
    }
  ]
}
```


Returned Values

- Normal

  200

- Abnormal

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

Returned Values	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 so that 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 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**.

5.4.8 Querying AS Policy Details

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 5-108 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 Message

- Request parameters

  None

- Example request

  This example shows how to query 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 Message

- Response parameters

Table 5-109 Response parameters

Parameter	Type	Description
scaling_policy	Object	Specifies details about the AS policy. For details, see **Table 5-110**.

Table 5-110 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. Supports fuzzy search.
scaling_policy_id	String	Specifies the AS policy ID.
policy_status	String	Specifies the AS policy status. • **INSERVICE**: The AS policy is enabled. • **PAUSED**: The AS policy is disabled. • **EXECUTING**: The AS policy is being executed.

Parameter	Type	Description
scaling_policy_type	String	Specifies the AS policy type. • **ALARM**: indicates that the scaling action is triggered by an alarm. A value is returned for **alarm_id**, and no value is returned for **scheduled_policy**. • **SCHEDULED**: indicates that the scaling action is triggered as scheduled. A value is returned for **scheduled_policy**, and no value is returned for **alarm_id**, **recurrence_type**, **recurrence_value**, **start_time**, or **end_time**. • **RECURRENCE**: indicates that the scaling action is triggered periodically. Values are returned for **scheduled_policy**, **recurrence_type**, **recurrence_value**, **start_time**, and **end_time**, and no value is returned for **alarm_id**.
alarm_id	String	Specifies the alarm ID.
scheduled_policy	Object	Specifies the periodic or scheduled AS policy. For details, see **Table 5-111**.
scaling_policy_action	Object	Specifies the scaling action of the AS policy. For details, see **Table 5-112**.
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 5-111 scheduled_policy field description

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

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

Table 5-112 scaling_policy_action field description

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

- Example response

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

Returned Values

- Normal

  200

- Abnormal

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

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 so that 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 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 Details of 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 5-113 Parameter description

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

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

Request Message

- Request parameters

  None

- Example request

  This example shows how to query 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 Message

- Response parameters

Table 5-114 Response parameters

Parameter	Type	Description
scaling_policy	Object	Specifies details about the AS policy. For details, see **Table 5-115**.

Table 5-115 scaling_policy field description

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

Parameter	Type	Description
scaling_policy_type	String	Specifies the AS policy type. • **ALARM**: indicates that the scaling action is triggered by an alarm. A value is returned for **alarm_id**, and no value is returned for **scheduled_policy**. • **SCHEDULED**: indicates that the scaling action is triggered as scheduled. A value is returned for **scheduled_policy**, and no value is returned for **alarm_id**, **recurrence_type**, **recurrence_value**, **start_time**, or **end_time**. • **RECURRENCE**: indicates that the scaling action is triggered periodically. Values are returned for **scheduled_policy**, **recurrence_type**, **recurrence_value**, **start_time**, and **end_time**, and no value is returned for **alarm_id**.
alarm_id	String	Specifies the alarm ID.
scheduled_policy	Object	Specifies the periodic or scheduled AS policy. For details, see **Table 5-116**.
scaling_policy_action	Object	Specifies the scaling action of the AS policy. For details, see **Table 5-117**.
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	Object	Provides additional information. For details, see **Table 5-118**.

Table 5-116 scheduled_policy field description

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

Table 5-117 scaling_policy_action field description

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

Table 5-118 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": "al1513822380493GvlJKZwA8",
         "scheduled_policy": {
         },
         "cool_down_time": 900,
         "scaling_policy_action": {
               "operation": "ADD",
               "size": 1,
               "limits": 111
         },
         "policy_status": "INSERVICE",
         "create_time": "2018-03-21T08:03:35Z",
         "meta_data": {
            "metadata_eip_id": "263f0886-de6a-4e21-ad83-814ca9f3844e",
            "metadata_eip_address": "255.255.255.255"
         }
   }
}
```


Returned Values

- Normal

  200
- Abnormal

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

Error Codes

See **Error Codes**.

5.4.10 Executing, Enabling, or Disabling an AS Policy

Function

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

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

URI

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

Table 5-119 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 Message

- Request parameters

  Table 5-120 Request parameters

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

- Example request

  This example shows how to immediately execute the AS policy with ID **906f73ff-56e8-41b2-a005-8157d0c60361**.

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

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


Response Message

- Response parameters

  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 so that 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 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 5-121 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 Message

- Request parameters

  None

- Example request

  This example shows how to delete 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 Message

- Response parameters

  None

- Example response

  None

Returned Values

- Normal

  204

- Abnormal

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

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

Error Codes

See **Error Codes**.

5.4.12 Performing Operations on AS Policies in Batches

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 5-122 Parameter description

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

Request Message

- Request parameters

Table 5-123 Request parameters

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

Parameter	Mandatory	Type	Description
delete_alarm	No	String	Specifies whether to delete the alarm rule used by the alarm policy. The value can be **yes** or **no** (default). This parameter is available only when **action** is set to **delete**.

- Example request

  This example shows how to enable 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 Message

- Response parameters

  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.

Returned Value	Description
407 Proxy Authentication Required	You must use the proxy server for authentication so that 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 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 5-124 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. • AS group: **SCALING_GROUP** • Bandwidth: **BANDWIDTH**
scaling_resource_id	No	String	Specifies the scaling resource ID.
execute_type	No	String	Specifies the AS policy execution type. • **SCHEDULED**: automatically triggered at a specified time point • **RECURRENCE**: automatically triggered at a specified time period • **ALARM**: alarm-triggered • **MANUAL**: manually triggered
start_time	No	String	Specifies the start time that complies with UTC for querying AS policy execution logs. The format of the start time is **yyyy-MM-ddThh:mm:ssZ**.
end_time	No	String	Specifies the end time that complies with UTC for querying AS policy execution logs. The format of the end time is **yyyy-MM-ddThh:mm:ssZ**.
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum parameter value is **0**.

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

Request Message

- Request parameters

  None

- Example request

  This example shows how to query the AS policy execution log with ID **05545d3d-ccf9-4bca-ae4f-1e5e73ca0bf6**.

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

Response Message

- Response parameters

Table 5-125 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	Specifies the AS policy execution logs. For details, see **Table 5-126**.

Table 5-126 scaling_policy_execute_log field description

Parameter	Type	Description
status	String	Specifies the AS policy execution status. • **SUCCESS**: The AS policy has been executed. • **FAIL**: Executing the AS policy failed. • **EXECUTING**: The AS policy is being executed.
failed_reason	String	Specifies the AS policy execution failure.

Parameter	Type	Description
execute_type	String	Specifies the AS policy execution type. • **SCHEDULED**: automatically triggered at a specified time point • **RECURRENCE**: automatically triggered at a specified time period • **ALARM**: alarm-triggered • **MANUAL**: manually triggered
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.
scaling_resource_type	String	Specifies the scaling resource type. • AS group: **SCALING_GROUP** • Bandwidth: **BANDWIDTH**
scaling_resource_id	String	Specifies the scaling resource ID.
old_value	String	Specifies the source value.
desire_value	String	Specifies the target value.
limit_value	Integer	Specifies the operation restrictions. If **scaling_resource_type** is set to **BANDWIDTH** and **operation** is not **SET**, this parameter takes effect and the unit is Mbit/s. In this case: • If **operation** is set to **ADD**, this parameter indicates the maximum bandwidth allowed. • If **operation** is set to **REDUCE**, this parameter indicates the minimum bandwidth allowed.
type	String	Specifies the AS policy execution type. • **ADD**: indicates adding instances. • **REMOVE**: indicates reducing instances. • **SET**: indicates setting the number of instances to a specified value.
job_records	Array	Specifies the tasks contained in a scaling action based on an AS policy. For details, see **Table 5-127**.

Parameter	Type	Description
meta_data	Object	Provides additional information. For details, see Table 5-128.

Table 5-127 job_records field description

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

Table 5-128 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.
metadataeip_address	String	Specifies the EIP for the bandwidth in the bandwidth scaling policy.

- Example response

```
{
 "limit": 20,
 "scaling_policy_execute_log": [
  {
```



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


Returned Values

- Normal

  200

- Abnormal

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

Returned Values	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**.

5.6 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 5-129 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.
start_time	No	String	Specifies the start time that complies with UTC for querying scaling action logs. The format of the start time is **yyyy-MM-ddThh:mm:ssZ**.
end_time	No	String	Specifies the end time that complies with UTC for querying scaling action logs. The format of the end time is **yyyy-MM-ddThh:mm:ssZ**.
start_number	No	Integer	Specifies the start line number. The default value is **0**. The minimum parameter value is **0**.
limit	No	Integer	Specifies the number of query records. The default value is **20**. The value range is 0 to 100.

Request Message

- Request parameters

  None

- Example request

  This example shows how to query 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 Message

- Response parameters

  Table 5-130 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	Specifies scaling action logs. For details, see **Table 5-131**.

Table 5-131 scaling_activity_log field description

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

- Example response

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



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


Returned Values

- Normal

  200

- Abnormal

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

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

Error Codes

See **Error Codes**.

5.6.2 Querying Scaling Action Logs (V2)

Function

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

- The difference between the V2 and V1 APIs for querying scaling action logs is that V2 displays more detailed action logs, such as ELB migration logs and instance standby logs.
- Search criteria can be the start time, end time, start line number, number of records, and scaling action type.
- If no search criteria are specified, a maximum of 20 scaling action logs can be queried by default.

URI

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

NOTE

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

Table 5-132 Parameter description

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

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

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

Request Message

- Request parameters

  None

- Example request

  This example shows how to query 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 Message

- Response parameters

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_activity_log	Array	Specifies scaling action logs. For details, see **Table 5-134**.

Table 5-134 scaling_activity_log field description

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

Parameter	Type	Description
instance_removed_list	Array	Specifies names of the ECSs that are removed from the AS group in a scaling action. For details, see **Table 5-135**.
instance_deleted_list	Array	Specifies names of the ECSs that are removed from the AS group and deleted in a scaling action. For details, see **Table 5-135**.
instance_added_list	Array	Specifies names of the ECSs that are added to the AS group in a scaling action. For details, see **Table 5-135**.
instance_failed_list	Array	Specifies the ECSs for which a scaling action fails. For details, see **Table 5-135**.
instance_standby_list	Array	Specifies the ECSs that are set to standby mode or for which standby mode is canceled in a scaling action. For details, see **Table 5-135**.
scaling_value	String	Specifies the number of added or deleted instances during the scaling.
description	String	Specifies the description of the scaling action.
instance_value	Integer	Specifies the number of instances in the AS group.
desire_value	Integer	Specifies the expected number of instances for the scaling action.
lb_bind_success_list	Array	Specifies the load balancers that are bound to the AS group. For details, see **Table 5-136**.
lb_bind_failed_list	Array	Specifies the load balancers that failed to be bound to the AS group. For details, see **Table 5-136**.
lb_unbind_success_list	Array	Specifies the load balancers that are unbound from the AS group. For details, see **Table 5-136**.
lb_unbind_failed_list	Array	Specifies the load balancers that failed to be unbound from the AS group. For details, see **Table 5-136**.
type	String	Specifies the type of the scaling action.

Table 5-135 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 5-136 modify_lb field description

Parameter	Type	Description
lbaas_listener	Object	Specifies information about an enhanced load balancer. For details, see **Table 5-137**.
listener	String	Specifies information about a classic load balancer.
failed_reason	String	Specifies the cause of a load balancer migration failure.
failed_details	String	Specifies the details of a load balancer migration failure.

Table 5-137 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.

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 so that 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 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 5-138 Parameter description

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

Request Message

- Request parameters

  None

- Example request

  This example shows how to query 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 Message

- Response parameters

Table 5-139 Response parameters

Parameter	Type	Description
quotas	Object	Specifies quota details. For details, see **Table 5-140**.

Table 5-140 quotas field description

Parameter	Type	Description
resources	Array	Specifies resources. For details, see **Table 5-141**.

Table 5-141 resources field description

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

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

- Example response

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

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

Error Codes

See **Error Codes**.

5.7.2 Querying AS policy and instance quotas

Function

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

URI

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

Table 5-142 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 Message

- Request parameters

  None

- Example request

  This example shows how to query 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 Message

- Response parameters

Table 5-143 Response parameters

Parameter	Type	Description
quotas	Object	Specifies quota details. For details, see **Table 5-144**.

Table 5-144 quotas field description

Parameter	Type	Description
resources	Array	Specifies resources. For details, see **Table 5-145**.

Table 5-145 resources field description

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

- Example response

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

Returned Value	Description
407 Proxy Authentication Required	You must use the proxy server for authentication so that 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 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 5-146 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 Message

- Request parameters

  Table 5-147 Request parameters

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

- Example request

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

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

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



```
    "topic_scene": [

"SCALING_UP","SCALING_UP_FAIL","SCALING_DOWN","SCALING_DOWN_FAIL","SCALING_GROUP_ABNORMAL"
    ]
}
```

Response Message

- Response parameters

  Table 5-148 Response parameters

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

- Example response

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

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

Returned Values

- Normal

  200

- Abnormal

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

Returned Value	Description
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication so that 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 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 5-149 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 Message

- Request parameters

  None

- Example request

  This example shows how to query the notification list 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 Message

- Response parameters

Table 5-150 Response parameters

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

Table 5-151 topics field description

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

- Example response

```
{
    "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 so that 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 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**.

5.8.3 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 5-152 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 Message

- Request parameters

  None

- Example request

  This example shows how to delete the notification 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 Message

- Response parameters

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 so that 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 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 Hook

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 5-153 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 Message

- Request parameters

  Table 5-154 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.

Parameter	Mandatory	Type	Description
lifecycle_hook_type	Yes	String	Specifies the lifecycle hook type. Options: • **INSTANCE_TERMINATING**: The hook suspends the instance when the instance is terminated. • **INSTANCE_LAUNCHING**: The hook suspends the instance when the instance is started.
default_result	No	String	Specifies the default lifecycle hook callback operation. By default, this operation is performed when the timeout duration expires. • ABANDON • CONTINUE **NOTE** • If an instance is starting, **CONTINUE** indicates that your customized operations are successful and the instance can be used. **ABANDON** indicates that your customized operations failed, and the instance will be terminated. In such a case, the scaling action fails, and you must create a new instance. • If an instance is stopping, both **ABANDON** and **CONTINUE** allow instance termination. The difference between the two states is as follows: **ABANDON** stops other lifecycle hooks, but **CONTINUE** allows the completion of other lifecycle hooks. • The default value of this parameter is **ABANDON**.

Parameter	Mandatory	Type	Description
default_timeout	No	Integer	Specifies the lifecycle hook timeout duration, which ranges from 300 to 86400 in the unit of second. The default value is 3600. By default, this parameter specifies the instance waiting duration. You can prolong the timeout duration or perform the **CONTINUE** or **ABANDON** operation before the timeout duration expires.
notification_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: <>&'() After a notification object is configured, the SMN service sends your customized notification to the object.

- Example request

  This example shows how to create a 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 Message

- Response parameters

  Table 5-155 Response parameters

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

- Example response

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

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication so that 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 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 5-156 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 Message

- Request parameters

  None

- Example request

  This example shows how to query 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 Message

- Response parameters

Table 5-157 Response parameters

Parameter	Type	Description
lifecycle_hooks	Array	Specifies lifecycle hooks. For details, see **Table 5-158**.

Table 5-158 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. • INSTANCE_TERMINATING • INSTANCE_LAUNCHING
default_result	String	Specifies the default lifecycle hook callback operation. • ABANDON • CONTINUE

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

- Example response

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

Returned Values

- Normal

  200

- Abnormal

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

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 5-159 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 Message

- Request parameters

  None

- Example request

  This example shows how to query 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 Message

- Response parameters

Table 5-160 Response parameters

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

Parameter	Type	Description
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 so that 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 of an internal service error.

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

Error Codes

See **Error Codes**.

5.9.4 Modifying a Lifecycle Hook

Function

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

URI

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

Table 5-161 Parameter description

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

Request Message

- Request parameters

Table 5-162 Request parameters

Parameter	Mandatory	Type	Description
lifecycle_hook_type	No	String	Specifies the lifecycle hook type. Options: • **INSTANCE_TERMINATING**: The hook suspends the instance when the instance is terminated. • **INSTANCE_LAUNCHING**: The hook suspends the instance when the instance is started.
default_result	No	String	Specifies the default lifecycle hook callback operation. By default, this operation is performed when the timeout duration expires. • ABANDON • CONTINUE **NOTE** • If an instance is starting, **CONTINUE** indicates that your customized operations are successful and the instance can be used. **ABANDON** indicates that your customized operations failed, and the instance will be terminated. In such a case, the scaling action fails, and you must create a new instance. • If an instance is stopping, both **ABANDON** and **CONTINUE** allow instance termination. The difference between the two states is as follows: **ABANDON** stops other lifecycle hooks, but **CONTINUE** allows the completion of other lifecycle hooks. • The default value of this parameter is **ABANDON**.
default_timeout	No	Integer	Specifies the lifecycle hook timeout duration, which ranges from 300 to 86400 in the unit of second. The default value is 3600. By default, this parameter specifies the instance waiting duration. You can prolong the timeout duration or perform the **CONTINUE** or **ABANDON** operation before the timeout duration expires.

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

- Example request

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

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

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

Response Message

- Response parameters

  Table 5-163 Response parameters

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

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

- Example response

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

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
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 so that 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 of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.9.5 Calling Back an Instance 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 your custom operations were successful before the timeout duration elapses, select **Abandon** or **Continue** to complete the lifecycle action.
- If you require more time to complete your custom operations, select Extend Timeout 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 5-164 Parameter description

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

Request Message

- Request parameters

Table 5-165 Request parameters

Parameter	Mandatory	Type	Description
lifecycle_action_key	No	String	Specifies the lifecycle operation token, which is obtained by calling the API for **querying instance suspension**. When specifying a lifecycle callback object, this field is mandatory if the **instance_id** parameter is not used. If both this parameter and the **instance_id** parameter are used, preferentially use this parameter for callback.
instance_id	No	String	Specifies the instance ID. When a lifecycle callback object is specified, this parameter is mandatory if the **lifecycle_action_key** parameter is not used.
lifecycle_hook_name	No	String	Specifies the lifecycle hook name. When a lifecycle callback object is specified, this parameter is mandatory if the **lifecycle_action_key** parameter is not used.
lifecycle_action_result	Yes	String	Specifies the lifecycle callback action. • **ABANDON**: terminates the instance. • **CONTINUE**: continues the instance. • **EXTEND**: extends the timeout duration, one hour each time.

- Example request

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

```
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 Message

- Response parameters

  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 so that 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 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**.

5.9.6 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 5-166 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 Message

- Request parameters

  None

- Example request

  This example shows how to query 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 Message

- Response parameters

  Table 5-167 Response parameters

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

  Table 5-168 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. ● **HANGING**: suspends the instance. ● **CONTINUE**: continues the instance. ● **ABANDON**: terminates the instance.
timeout	String	Specifies the timeout duration in the format of "YYYY-MM-DDThh:mm:ssZ". The time is UTC-compliant.
default_result	String	Specifies the default lifecycle hook callback operation.

- Example response

```
{
  "instance_hanging_info": [
    {
```



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

Returned Values

- Normal

  200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication so that 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 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 5-169 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 Message

- Request parameters

  None

- Example request

  This example shows how to delete 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 Message

- Response parameters

  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 so that 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 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 Tag Management

5.10.1 Querying Tags

Function

This API is used to query tags by project ID.

URI

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

Table 5-170 Parameter description

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

Request Message

- Request parameters

  None

- Example request

  This example shows how to query resource tags of an AS group.

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

Response Message

- Response parameters

  Table 5-171 Response parameters

Parameter	Type	Description
tags	Array	Specifies the resource tag.

  Table 5-172 Tag field description

Parameter	Type	Description
key	String	Specifies the resource tag key.
values	Array	Specifies the resource 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 so that the request can be processed.

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

Error Codes

See **Error Codes**.

5.10.2 Querying Tags of a Resource

Function

This interface is used to query tags of a specified resource by project ID and resource ID.

URI

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

Table 5-173 Parameter description

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

Request Message

- Request parameters

  None

- Example request

  This example shows how to query the resource 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 Message

- Response parameters

  Table 5-174 Response parameters

Parameter	Type	Description
tags	Array	Specifies resource tags. For details, see **Table 5-175**.
sys_tags	Array	Specifies system resource tags. For details, see **Table 5-175**.

  Table 5-175 ResourceTag field description

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

- 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 so that 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**.

5.10.3 Creating or Deleting a Tag

Function

This API is used to create or delete a resource 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 5-176 Parameter description

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

Request Message

- Request parameters

Table 5-177 Request parameters

Parameter	Mandatory	Type	Description
tags	Yes	Array	Specifies the tag list. For details, see **Table 5-178**. If **action** is set to **delete**, the tag structure cannot be missing, and the key cannot be left blank or an empty string.
action	Yes	String	Operation ID (case sensitive) • **delete**: indicates deleting a tag. • **create**: indicates creating a tag. If the same key value already exists, it will be overwritten.

Table 5-178 ResourceTag field description

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the resource tag key. Tag keys of a resource must be unique. ● A tag key contains a maximum of 36 characters. The character set is as follows: A-Z, a-z, 0-9, hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF). ● When **action** is set to **delete**, the tag character set is not verified, and a key contains a maximum of 127 Unicode characters.
value	Yes	String	Specifies the resource tag value. ● When **action** is set to **delete**, the tag character set is not verified, and a value contains a maximum of 255 Unicode characters. If **value** is specified, tags are deleted by key and value. If **value** is not specified, tags are deleted by key.

- Example request

  This example shows how to create two resource tags (key = **ENV15** and value = **ENV15**) and (key = **ENV151** and value = **ENV151**) in 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 Message

- Response parameters
  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 so that 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**.

5.10.4 Querying Resources

Function

This API is used to query instances of a specified resource type by project ID.

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 5-179 Parameter description

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

Request Message

- Request parameters

Table 5-180 Request parameters

Parameter	Mandatory	Type	Description
tags	No	Array	Specifies filter criteria with tags included. A maximum of 10 keys can be contained. The structure body must be complete. For details, see **Table 5-181**.
tags_any	No	Array	Specifies filter criteria with any tag included. A maximum of 10 keys can be contained. For details, see **Table 5-181**.

Parameter	Mandatory	Type	Description
not_tags	No	Array	Specifies filter criteria without tags included. A maximum of 10 keys can be contained. For details, see **Table 5-181**.
not_tags_any	No	Array	Specifies filter criteria without any tag included. A maximum of 10 keys can be contained. For details, see **Table 5-181**.
limit	No	String	Specifies the maximum number of query records. The maximum value is 1000, and the minimum value is 1. • If the **action** value is **count**, this parameter is invalid. • If the **action** value is **filter**, the default value is **1000**.
action	Yes	String	Specifies the operation, which can be **filter** or **count**. • **filter**: indicates that resources are filtered by tag and the resources meeting the search criteria are returned on pages. • **count**: indicates that resources are searched by tag and the number of resources meeting the search criteria is returned.

Parameter	Mandatory	Type	Description
offset	No	String	Specifies the index position. The query starts from the next image indexed by this parameter. The value must be a non-negative number. You do not need to specify this parameter when querying resources on the first page. When you query resources on subsequent pages, set the value of **offset** to the location returned in the response body for the previous query. • If the **action** value is **count**, this parameter is invalid. • If the **action** value is **filter**, the default value is **0**.
matches	No	Array	Specifies fuzzy search. For details, see **Table 5-182**.

Table 5-181 Tag field description

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the resource tag key. It contains a maximum of 127 Unicode characters. It cannot be left blank (This parameter is not verified in the search process.) A maximum of 10 keys are allowed and the key cannot be left blank or an empty string. Each key must be unique.

Parameter	Mandatory	Type	Description
values	Yes	Array	Specifies resource tag values. A value contains a maximum of 255 Unicode characters. A key contains a maximum of 10 values. Each value of the same key must be unique. • The asterisk (*) is reserved for the system. If the value starts with *, it indicates that fuzzy match is performed for the digits following *. The value cannot contain only asterisks (*). • If the values are null (not default), it indicates **any_value** (querying any value). The resources contain one or multiple values listed in **values** will be found and displayed.

Table 5-182 match field description

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

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

    This example shows how to query AS group resources 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

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

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

  This example shows how to query the number of AS group resources 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

{
    "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 Message

- Response parameters

Table 5-183 Response parameters

Parameter	Type	Description
resources	Array	Specifies tag resources. For details, see **Table 5-184**.

Parameter	Type	Description
total_count	Integer	Specifies the total number of records. When **action** is set to **count**, only this parameter is returned. The values of **resources** and **marker** are not returned.
marker	String	Specifies the paging location identifier.

Table 5-184 Resource field description

Parameter	Type	Description
resource_id	String	Specifies the resource ID.
resource_detail	String	Specifies the resource details.
tags	Array	Specifies tags. If there is no tag, **tags** is taken as an empty array by default. For details, see **Table 5-185**.
resource_name	String	Specifies the resource name. If there is no resource, this parameter is an empty string by default.

Table 5-185 ResourceTag field description

Parameter	Type	Description
key	String	Specifies the resource tag key. It contains a maximum of 36 Unicode characters.
value	String	Specifies the resource tag value. It contains a maximum of 36 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 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 so that 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 of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.11 API Management

5.11.1 Querying API Versions

Function

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

URI

GET /

Request Message

- Request parameters

  None

- Example request

  This example shows how to query all versions of an API.

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

Response Message

- Response parameters

Table 5-186 Response parameters

Parameter	Type	Description
versions	Array	Specifies the API versions.

Table 5-187 versions field description

Parameter	Type	Description
id	String	Specifies the API version ID.
links	Array	Specifies the API URL. For details, see **Table 5-188**.
min_version	String	Specifies the earliest supported API version number.

Parameter	Type	Description
status	String	Specifies the API version status. • **CURRENT**: indicates a primary version. • **SUPPORTED**: indicates an earlier version which is still supported. • **DEPRECATED**: indicates a deprecated version which may be deleted later.
updated	String	Specifies the release date of an API version.
version	String	Specifies the latest supported API version number.

Table 5-188 links field description

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

- Example response

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

Returned Values

- Normal

200

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
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 so that 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 of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the system is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

Error Codes

See **Error Codes**.

5.11.2 Querying a Specified API Version

Function

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

URI

GET /{api_version}

Table 5-189 Parameter description

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

Request Message

- Request parameters

  None

- Example request

  This example shows how to query V1 AS API.

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

Response Message

- Response parameters

  Table 5-190 Response parameters

Parameter	Type	Description
version	Object	Specifies a specified API version.

  Table 5-191 version field description

Parameter	Type	Description
id	String	Specifies the API version ID.
links	Array	Specifies the API URL. For details, see **Table 5-192**.
min_version	String	Specifies the earliest supported API version number.
status	String	Specifies the API version status. • **CURRENT**: indicates a primary version. • **SUPPORTED**: indicates an earlier version which is still supported. • **DEPRECATED**: indicates a deprecated version which may be deleted later.
updated	String	Specifies the release date of an API version.

Parameter	Type	Description
version	String	Specifies the latest supported API version number.

Table 5-192 links field description

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

- Example response

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

Returned Values

- Normal

  200

- Abnormal

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

Returned Value	Description
407 Proxy Authentication Required	You must use the proxy server for authentication so that 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 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 Permissions Policies and Supported Actions

6.1 AS Group

Permission	APIs	Actions	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	√	√

Permission	APIs	Actions	IAM Project	Enterprise Project
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	√	√
Enabling or disabling an AS group	POST /autoscaling-api/v1/{project_id}/scaling_group/{scaling_group_id}/action	as:groups:action	√	√

6.2 AS Configuration

Permission	APIs	Actions	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	√	√

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

6.3 Instance

Permission	APIs	Actions	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	√	√

Permission	APIs	Actions	IAM Project	Enterprise Project
Performing operations on instances in batches	POST /autoscaling-api/v1/{project_id}/scaling_group_instance/{scaling_group_id}/action	as:instances:batchAction	√	√

6.4 AS Policy

Permission	APIs	Actions	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	√	√

Permission	APIs	Actions	IAM Project	Enterprise Project
Executing, enabling, or disabling an AS policy	POST /autoscaling-api/v1/{project_id}/scaling_policy/{scaling_policy_id}/action	as:policies:action	√	√
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	APIs	Actions	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}	as:groups:get as:policies:list	√	√
Querying AS policy details	GET /autoscaling-api/v2/{project_id}/scaling_policy/{scaling_policy_id} s	as:policies:get	√	√
Performing operations on AS policies in batches	POST /autoscaling-api/v1/{project_id}/scaling_policies/action	as:policies:batchAction	√	√

6.5 AS Policy Execution Log

Permission	APIs	Actions	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	√	√

6.6 Scaling Action Log

Permission	APIs	Actions	IAM Project	Enterprise Project
Querying scaling action logs	GET /autoscaling-api/v1/{project_id}/scaling_activity_log/{scaling_group_id}	as:acivityLogs:list	√	√
Querying scaling action logs (V2)	GET /autoscaling-api/v2/{project_id}/scaling_activity_log/{scaling_group_id}	as:acivityLogs:list	√	√

6.7 Quota

Permission	APIs	Actions	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	√	√

6.8 Notification

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

6.9 Lifecycle Hook

Permission	APIs	Actions	IAM Project	Enterprise Project
Creating a lifecycle hook	POST /autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}	as:lifecycleHooks:create	√	√
Querying lifecycle hooks	GET /autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}/list	as:lifecycleHooks:list	√	√
Querying lifecycle hook details	GET /autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}/{lifecycle_hook_name}	as:lifecycleHooks:get	√	√

Permission	APIs	Actions	IAM Project	Enterprise Project
Modifying a lifecycle hook	PUT /autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}/{lifecycle_hook_name}	as:lifecycleHooks:update	√	√
Calling back an instance lifecycle hook	PUT /autoscaling-api/v1/{project_id}/scaling_instance_hook/{scaling_group_id}/callback	as:instanceHooks:action	√	√
Querying instance suspension	GET /autoscaling-api/v1/{project_id}/scaling_instance_hook/{scaling_group_id}/list	as:instanceHooks:list	√	√
Deleting a lifecycle hook	DELETE /autoscaling-api/v1/{project_id}/scaling_lifecycle_hook/{scaling_group_id}/{lifecycle_hook_name}	as:lifecycleHooks:delete	√	√

6.10 Tag Management

Permission	APIs	Actions	IAM Project	Enterprise Project
Querying tags	GET /autoscaling-api/v1/{project_id}/{resource_type}/tags	as:tags:list	√	×
Querying tags of a resource	GET /autoscaling-api/v1/{project_id}/{resource_type}/{resource_id}/tags	as:tags:get	√	×
Updating or deleting a tag	POST /autoscaling-api/v1/{project_id}/{resource_type}/{resource_id}/tags/action	as:tags:set	√	×
Querying resources	POST /autoscaling-api/v1/{project_id}/{resource_type}/resource_instances/action	as:tagResources:list	√	×

A Appendix

A.1 AS Metrics

Function

This section describes metrics reported by AS to Cloud Eye as well as their namespaces and dimensions. You can use APIs provided by Cloud Eye to view the AS metrics and the alarms generated by Cloud Eye for AS.

Namespace

SYS.AS

Metrics

Metric	Name	Description	Value Range	Remarks
cpu_util	CPU Usage	Average CPU usage of all instances in a monitored object	≥ 0%	The monitored object is an AS group.
mem_util	Memory Usage	Average memory usage of all instances in a monitored object	≥ 0%	The monitored object is an AS group. **NOTE** This metric is unavailable if the image has no installed.

Metric	Name	Description	Value Range	Remarks
network_incoming_bytes_rate_inband	Inband Incoming Rate	Average number of incoming bytes per second on all instances in a monitored object	≥ 0	The monitored object is an AS group.
network_outgoing_bytes_rate_inband	Inband Outgoing Rate	Average number of outgoing bytes per second on all instances in a monitored object	≥ 0	The monitored object is an AS group.
instance_num	Number of Instances	Number of available instances in a monitored object	≥ 0	The monitored object is an AS group. Available ECSs are **INSERVICE** instances in an AS group.
disk_read_bytes_rate	Disks Read Rate	Number of bytes read from all instances in a monitored object per second	≥ 0	The monitored object is an AS group.
disk_write_bytes_rate	Disks Write Rate	Number of bytes written to all instances in a monitored object per second	≥ 0	The monitored object is an AS group.
disk_read_requests_rate	Disk Read Requests	Number of read requests sent to all instances in a monitored object per second	≥ 0	The monitored object is an AS group.
disk_write_requests_rate	Disks Write Requests	Number of write requests sent to all instances in a monitored object per second	≥ 0	The monitored object is an AS group.

NOTE

For details about whether your OS supports the **Memory Usage**, **Inband Outgoing Rate**, and **Inband Incoming Rate** metrics, see *Elastic Cloud Server User Guide*.

Dimension

Key	Value
AutoScalingGroup	AS group ID

A.2 Error Codes

Description

This section provides the meanings of error codes returned by AS APIs.

Example of Returned Error Information

{"error":{"code":"AS.0001","message":"System error."}}

Error Code Description

HTTP Status Code	Error Code	Description	Error Message	Solution
500	AS.0001	A system error occurs.	System error.	Try again later or contact technical support.
400	AS.0002	The message body is empty.	Request body is null.	Enter a valid message body.
401	AS.0005	The header in the request carries no or an empty token.	The token of the header in the request is null.	Enter a valid token.
401	AS.0006	The header in the request carries an incorrect, invalid, or expired token.	The token of the header in the request is incorrect.	Enter a valid token.
404	AS.0007	The requested resources are not found.	The requested resource [%s] could not be found.	Use the correct URL parameter.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.0008	The **project id** value carried in the URL is different from that resolved from the token.	Incorrect ProjectID.	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 te_admin, as_adm, or other required roles exist.
403	AS.0012	Your rights to perform the operation have been frozen.	The user role is suspended.	Check whether your user roles include **op_suspended**, the frozen one.
403	AS.0013	Your rights to perform the operation are disabled.	Your rights to perform the operation are disabled.	Check whether your user roles include **op_restricted**, the restricted one.
400	AS.0022	The request is invalid.	Request body error	Check whether the request body is in standard JSON format or whether an unsupported parameter exists.
400	AS.0026	No scaling action is allowed in the cooldown period.	Scaling action is not allowed in the cooling duration.	Try again later.
400	AS.0031	Fine-grained authentication failed because no authentication item is specified.	Policy doesn't allow [%s] to be performed.	Add the required authorization item.
400	AS.0033	Invalid API ID.	The api version is illegal, only v1 and v2.	Enter a correct API ID.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.0034	Failed to trigger the AS policy because a scaling action in the AS group is in progress.	Failed to execute the policy because the AS group is in active state.	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 **start number** value is invalid.	The value of parameter Start number is invalid.	Enter a valid **start number** value.
400	AS.1002	The **limit** value is invalid.	The value of parameter Limit is invalid.	Enter a valid **limit** value.
400	AS.1003	The AS configuration ID is empty.	The AS configuration ID is null.	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 being used by an AS group and cannot be deleted.	The AS configuration is in use.	Change this AS configuration for the AS group to another one and delete the AS configuration.
400	AS.1007	The AS configuration name is empty.	The AS configuration name is null.	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 not specified.	The AS group ID is null.	Add an AS group ID.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.1011	The **instance_config** field is not specified.	The instance configuration information is null.	Enter a valid **instance_config** value.
400	AS.1014	The image ID is not specified.	The image ID in the AS configuration is null.	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 flavor ID is not specified.	The specification ID in the AS configuration cannot be null.	Add a flavor ID.
400	AS.1017	The flavor of the AS configuration does not exist.	The specification [%s] in the AS configuration does not exist.	Use a correct flavor ID.
400	AS.1018	The flavor and image do not match.	The specification [%s] and image is not match.	Check whether the flavor matches the image. If not, modify the configuration.
400	AS.1019	The flavor and disk do not match.	The disk of this type is not applicable to the ECS.	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 unavailable.	The image in the AS configuration is not available.	Use a correct image ID.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.1023	The AS configuration name is invalid.	Invalid AS configuration name.	Use a valid AS configuration name.
400	AS.1024	The number of AS configurations exceeds the upper limit.	The number of AS configurations exceeds the upper limit.	Delete idle AS configurations or apply for a higher quota.
400	AS.1025	The user login mode in the AS configuration is not unique.	The user login mode in the AS configuration is not unique.	Use account-and-password or key-pair login mode only.
400	AS.1026	The user login mode in the AS configuration is empty.	The user login mode in the AS configuration is empty.	
400	AS.1027	The user AS configuration is invalid.	The scaling config personality is invalid.	Enter a valid **personality** value.
400	AS.1028	The disk in the AS configuration is empty.	The disk in the AS configuration is null.	Enter a valid **disk** value.
400	AS.1029	The number of system disks in the AS configuration is invalid.	The number of system disks in the AS configuration is invalid.	Ensure that there is only one system disk.
400	AS.1030	The size of the system disk in the AS configuration is smaller than the requirement.	The size of the system disk in the AS configuration is less than the specification required.	Use a proper system disk size.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.1031	The size of the disk in the AS configuration is invalid.	The size of the disk in the AS configuration is not correct.	Use a proper disk size.
400	AS.1032	The number of disks in the AS configuration exceeds 24.	The ECS type [%s] in the AS configuration do not support 24 disks.	Ensure that the number of disks does not exceed the limit.
400	AS.1033	The **volumeType** of the disk in the AS configuration is invalid.	Parameter volumeType in the AS configuration is invalid.	Use a valid **volume_type** value.
400	AS.1034	The **diskType** in the AS configuration is invalid.	Parameter diskType in the AS configuration is invalid.	Use a valid **disk_type** value.
400	AS.1035	The password in the AS configuration fails to meet the complexity requirements.	Parameter adminPass in the AS configuration is invalid.	Use passwords that meet complexity requirements.
400	AS.1036	The memory of 32-bit OS exceeds 4 GB.	32-bit operating system (OS) does not support the specification [%s] with 4G memory.	Change the image or the policy.
400	AS.1038	Deleting AS configurations in batches fails.	Batch deleting the AS configuration failed.	If this error code is returned, use parameter **Message** to obtain the configuration ID and the failure cause.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.1039	The number of AS configurations to be deleted in batches exceeds the upper limit.	The number of AS configurations is beyond the maximum limit.	Delete a maximum of 50 AS configurations at a time.
400	AS.1040	The AS configuration list is empty.	The list of AS config to be deleted is null.	Add the IDs of the AS configurations to be deleted in batches.
400	AS.1041	The **eip** field in the **public_ip** field is empty.	The eip info of scaling config is null.	Ensure that the **eip** field is not empty when specifying the **public_ip** field.
400	AS.1042	The bandwidth size is invalid.	The bandwidth size of eip is invalid.	Enter a valid bandwidth.
400	AS.1043	The EIP type is invalid.	The eip type of scaling config is invalid.	Use a valid EIP type.
400	AS.1044	The bandwidth billing model of the AS configuration is invalid.	The bandwidth charging mode of eip is invalid.	Use a valid bandwidth billing model.
400	AS.1045	The bandwidth type is invalid.	The bandwidth type of eip is invalid.	Use a valid bandwidth.
400	AS.1046	The bandwidth size is not specified.	The bandwidth size of eip is null.	Add the bandwidth value of the AS configuration.
400	AS.1047	The bandwidth billing model is not specified.	The bandwidth charging mode of eip is null.	Specify a proper bandwidth billing model.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.1048	The shared bandwidth ID of the AS configuration is not specified.	The bandwidth id of eip is null.	Add the shared bandwidth ID.
400	AS.1049	Parameter **userdata** in the AS configuration is invalid.	Parameter userdata in the AS configuration is invalid.	Use a valid **userdata**.
400	AS.1050	The user login mode in the AS configuration is invalid.	The user login mode in the AS configuration is illegal.	Use a valid login mode.
400	AS.1052	The **metadata** in the AS configuration is invalid.	Parameter metadata in the AS configuration is invalid.	Use a valid **metadata**, whose maximum length is 512 bytes and the **key** value cannot contain spaces, $, or periods(.).
400	AS.1053	The data image in the AS configuration is unavailable.	The data image is not available.	Use a valid data image.
400	AS.1054	The size of the data disk in the AS configuration is smaller than what the data image requires.	The size of the data disk in the AS configuration is less than the data image required.	Use a proper data disk.
400	AS.1055	A data disk image cannot be used to create a system disk.	The system disk is not support to data image.	Refer to the error code description.

HTTP Status Code	Error Code	Description	Error Message	Solution
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 selected DSS device is unavailable.	The DSS of the disk in the AS configuration is not available.	Use a correct DSS device.
400	AS.1058	The selected DSS device does not support the disk type.	The type of dss in the AS configuration is incorrect.	Change the DSS device or disk type.
400	AS.1059	The storage space on the selected DSS device is insufficient.	The capacity of dss in the AS configuration is not enough.	Change the DSS device.
400	AS.1060	You can use either DSS or EVS disks in an AS configuration.	DSS and EVS are used together in the AS configuration.	Refer to the error code description.
400	AS.1061	The selected DSS devices must be in the same AZ.	The DSS does not belong to the same AZ in the AS configuration.	Change DSS devices so that they are in the same AZ.
400	AS.1062	The number of disks with snapshot IDs in the AS configuration is different from that of EVS disks specified in the full-ECS image.	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.	Refer to the error code description.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.1063	The disk data backup in a full-ECS image is used to restore the disk in DSS.	The disk data backup in a full-ECS image cannot be used to restore the disk in DSS.	Refer to the error code description.
400	AS.1064	Your selected data disk will recover from the disk backup in the full-ECS image, and data mirroring is unavailable now.	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.	Refer to the error code description.
400	AS.1065	The VMs in the AS configuration do not belong to the same AZ.	ECS resources specified in the AS configuration belong to different AZs.	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.
400	AS.1067	Parameter **offset** is invalid.	The value of parameter Offset number is invalid.	Use a valid **offset** value.
400	AS.1068	The ECS group in the AS configuration does not exist.	The server group in the AS configuration does not exist.	Use the ID of an existing ECS group.

HTTP Status Code	Error Code	Description	Error Message	Solution
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 shared bandwidth of the AS configuration does not exist.	The bandwidth id of eip does not exist.	Use an existing shared bandwidth ID.
400	AS.1071	Parameter **tenancy** in the AS configuration is invalid.	Parameter tenancy in the AS configuration is invalid.	Use a valid **tenancy** value.
400	AS.1072	The ECS group ID in the AS configuration is invalid.	The server group ID is invalid.	Change to a correct ECS group ID.
400	AS.1073	DeH ID in the AS configuration does not exist.	The dedicated host id does not exist.	Use the ID of an existing DeH.
400	AS.1074	Parameter **marker** is invalid.	The value of parameter Marker is invalid.	Use a valid **marker** value.
400	AS.1075	Image ID in the AS configuration is invalid.	The image ID is invalid.	Use a correct image ID.
400	AS.1076	Shared bandwidth ID in the AS configuration is invalid.	The bandwidth id of eip is invalid.	Enter a correct shared bandwidth ID.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.1077	No DeH available.	No available dedicated host resource.	Create a DeH or restore an existing DeH.
400	AS.1078	The selected DeH does not have sufficient capacity.	The dedicated host has insufficient available capacity for [%s].	Allocate a DeH or use another DeH.
400	AS.1079	No DeH that supports this type of ECSs is available.	No dedicated host resources supporting this type [%s] of ECS.	Change the type of ECSs in the AS configuration.
400	AS.1080	No DeH is available in the AZ.	No dedicated host resources supporting the AZ [%s] you selected.	Change the AZ of the AS group or create a DeH in the AZ.
400	AS.1081	The AS configuration does not support IPv6 addresses.	This specification [%s] does not support IPv6.	Change the AS configuration.
400	AS.1082	The bandwidth is not shared.	Bandwidth type is not shared.	Use a shared bandwidth.
400	AS.1083	The billing model in the AS configuration is invalid.	Instance marketing type is illegal.	Use a valid **market_type** value.
400	AS.1084	Failed to query the spot pricing or pay-per-use flavor price.	Failed to query the price of specification [%s] from CBC.	Change the flavor in the AS configuration or contact technical support.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.1085	The priority policy used in multi-flavor AS configuration is invalid.	Invalid multi flavor priority policy.	Use a valid **multi_flavor_priority_policy** value.
400	AS.1086	The AS configuration is unavailable.	AS configuration is not available for AS group	Replace the AS configuration in the AS group.
400	AS.1087	The number of flavors in the AS configuration reaches the upper limit.	The number of flavors in the AS config exceeds 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 is not available in the AZ of the AS group.	The image in the AS configuration you selected is unavailable for the AZ [%s] in AS group.	Change another AS configuration or AZ for the AS group.
400	AS.1090	The selected flavor is incompatible with the image architecture.	Flavor {0} in the AS configuration is incompatible with the image architecture.	Ensure that the selected flavor is compatible with the image architecture.
400	AS.2002	The AS group name is empty.	The name of the AS group is null.	Add an AS group name.
400	AS.2003	The AS group name is too long.	The AS group name is too long.	Use an AS group name of proper length.
400	AS.2004	The maximum or minimum number of instances is invalid.	Invalid min or max number of instances in the AS group.	Enter correct maximum/minimum number of instances for the AS group.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.2005	The expected number of instances in the AS group is invalid.	The expected number cannot be less than the minimum number of instances or greater than the maximum number of instances.	Enter a valid number of expected instances for the AS group.
400	AS.2006	The cooldown period in the AS group is invalid.	Invalid cooldown period of the AS group.	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	The execution action of the AS group is invalid.	Invalid execution action of the AS group.	Use a correct scaling action for the AS group.
400	AS.2009	The AS group ID is not specified.	The AS group ID is null.	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	The AZ in the AS group is invalid.	Invalid AZ in AS group.	Use a valid value.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.2012	The VPC of the AS group does not exist.	The VPC of the AS group does not exist.	Use a valid value.
400	AS.2013	Parameter **networks** in the AS group is invalid.	Parameter **networks** in the AS group is invalid.	Use a valid value.
400	AS.2014	The security group of the AS group does not exist.	The security group of the AS group does not exist.	Use a valid value.
400	AS.2015	The load balancer listener of the AS group is invalid.	Parameter listenerId in the AS group is invalid.	Use a valid value.
400	AS.2016	The VPC to which the ELB listener in the AS group belongs is different from the VPC in the AS group.	The listener of the AS group does not belong to the vpc.	Change the VPC ID or ELB listener ID.
400	AS.2017	The VPC ID in the AS group is not specified.	The ID of the VPC in the AS group is null.	Add a VPC ID.
400	AS.2018	No AS is configured in the AS group.	No AS configuration is in the AS group.	Enable the AS group after adding an AS configuration to the AS group.

HTTP Status Code	Error Code	Description	Error Message	Solution
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 AS group status is invalid.	The scaling group status is illegal.	You are not allowed to perform the operation when the AS group is in the current status.
400	AS.2021	Deleting the AS group fails because there are instances in it.	The current number of instances in the AS group is not 0.	Before deleting the AS group, deleting its instances.
400	AS.2022	The AS group name contains invalid characters.	The AS group name contains invalid characters.	Use a correct AS group name.
400	AS.2023	The number of AS groups exceeds the upper limit.	The number of AS groups exceeds the upper limit.	Delete idle AS groups or apply for a higher quota.
400	AS.2024	The number of subnets in the AS group exceeds the upper limit.	The number of subnets in the AS group exceeds the upper limit.	Ensure that the number of subnets does not exceed the upper limit.
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	There are ELB listeners of different types in the AS group.	The type of listeners in the AS group is not unique.	**lb_listener_id** is alternative to **lbaas_listeners**.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.2027	The VPC to which some subnets in the AS group belong is different with the VPC in the AS group.	The subnet of the AS group does not belong to the vpc.	Change the VPC ID or subnet.
400	AS.2028	The new expected number of instances is the same as the original number.	The modified expected number of instances is the same as the original number.	Refer to the error code description.
400	AS.2029	The health check method for instances in the AS group is incorrect.	Invalid health check method of the AS group.	Use a valid **health_periodic_audit_method** value.
400	AS.2030	You are not allowed to modify theAZ, subnet, or security group information when there are instances in the AS group, the AS group is scaling, or the AS group is in **Inservice** state.	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.	Check the number of instances in the AS group and the status of the AS group, or try again later.
400	AS.2031	The health check period of the AS group is invalid.	Invalid health check period of the AS group.	Use a valid **health_periodic_audit_time** value.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.2032	The instance removal policy for the AS group is invalid.	Invalid instance removal policy.	Use a valid **instance_terminate_policy** value.
400	AS.2033	You are not allowed to perform the operation when the AS group is in the current status.	You are not allowed to perform the operation when the AS group is in current [%s] status.	Refer to the error code description.
400	AS.2034	The notification method for the AS group is invalid.	Invalid notification method of the AS group.	Use a valid notification method.
400	AS.2035	The number of ECSs in the AS group is greater than the upper limit because some ECSs are manually added.	The number of instances manually added to the AS group exceeds the maximum number of the instances required in the AS group.	Add a proper number of ECSs or increase the maximum number of instances in the AS group.
400	AS.2036	The number of ECSs in the AS group is smaller than the lower limit because some ECSs are manually deleted.	The number of instances manually deleted is less than the minimum number of the instances required in the AS group.	Delete a proper number of ECSs or decrease the minimum number of instances in the AS group.
400	AS.2037	The number of ELB listeners in the AS group reaches the upper limit.	The number of listeners in the AS group exceeds the upper limit.	Select a proper number of load balancer listeners.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.2038	The ECSs of this type in the AZ of the AS group have been sold out.	The type [%s] of ECS in the AZ you selected has been sold out.	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 **protocolPort** of the AS group is invalid.	Parameter **protocolPort** of the AS group is invalid.	Use a valid **protocolPort**.
400	AS.2040	Parameter **weight** of the AS group is invalid.	Parameter **weight** of the AS group is invalid.	Use a valid **weight**.
400	AS.2042	The load balancer pool in the AS group is invalid.	Parameter pool of lbaas in the AS group is invalid.	Use a valid **pool**.
400	AS.2043	Storage resources of this type are sold out or do not exist in the AZ specified for this AS group.	There is not avalid volume in the AZ [%s] you selected.	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 invalid.	The AZ in the AS group is not available.	Refer to the error code description. Change the AZ of the AS group.
400	AS.2045	The minimum or maximum number of instances in the AS group exceeds the limit.	The min or max number of instances in the AS group exceeds the upper limit.	Enter proper maximum and minimum numbers of instances for the AS group.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.2046	The grace period for the instance health check is invalid.	Invalid health check grace period of the AS group.	Use a valid **health_periodic_audit_grace_period** value.
400	AS.2047	Failed to modify load balancer parameters because a scaling action is ongoing.	The AS group is in active status.	Wait until the scaling action is complete and modify the load balancer parameters again.
400	AS.2051	The number of expected instances cannot be less than that of standby instances.	The expected number cannot be less than the number of instances moved into the standby state.	Ensure that the number of expected instances is not less than that of standby instances (including instances that are entering the standby mode and those that are already in standby mode).
400	AS.2052	The number of expected instances cannot be less than the total of standby and protected instances.	The expected number cannot be less than the sum of the number of standby instances 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	The priority policy used for multiple AZs in the AS group is invalid.	Invalid multi az priority policy.	Change the priority policy used for multiple AZs in the AS group.
400	AS.2054	Failed to change the AZ because a scaling action is ongoing.	The AS group is in active status.	Wait until the scaling action is complete and change the AZ again.
400	AS.3002	The AS policy type is invalid.	Invalid AS policy type.	Use a valid **scaling_policy_type** value.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.3003	When the AS policy is scheduled or periodic, parameter **scheduled_policy** is empty.	The information about the AS policy is null.	Use a valid **scheduled_policy** value.
400	AS.3004	The period type is incorrect.	Invalid recurrence type in the AS policy.	Use a valid **recurrence_type** value.
400	AS.3005	The end time is not specified for a periodic AS policy.	The end time of the scaling action triggered periodically is empty.	Enter a valid **end_time** value.
400	AS.3006	The format of the end time for the periodically triggered scaling action is incorrect.	The format of the end time for the scaling action triggered periodically 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	The triggering time is not specified.	Parameter lanchTime in the AS policy is null.	Enter a valid **launch_time** value.
400	AS.3009	The triggering time format is incorrect.	The format of parameter lanchTime is incorrect.	Use a correct triggering time format.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.3010	The triggering time of the scaling action triggered at a scheduled time must be later than the current time.	The triggering time of the scheduled policy 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 not specified.	The AS policy type is null.	Enter a valid **scaling_policy_type** value.
400	AS.3012	The cooldown period in the AS policy is invalid.	Invalid cooldown period in the AS policy.	Enter a valid **cool_down_time** value.
400	AS.3013	The AS policy name is not specified.	The AS policy name is null.	Enter a valid **scaling_policy_name** value.
400	AS.3014	The length of the AS policy name is invalid.	The length of the AS policy name is invalid.	Enter a valid **scaling_policy_name** value.
400	AS.3015	The execution action in the AS policy is not specified.	The action in the AS policy is null.	Enter a valid **scaling_policy_action** value.
400	AS.3016	The operation to perform the execution action in the AS policy is not specified.	The operation to perform the action in the AS policy is null.	Enter a valid **operation** value.
400	AS.3017	The operation to perform the action in the AS policy action is invalid.	The operation to perform the action in the AS policy action is invalid.	Enter a valid **operation** value.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.3018	The number of instances to which the AS policy applies is invalid.	The number of instances which action in the AS policy operates on is invalid.	Enter a valid **instance_number** value.
400	AS.3019	The AS group ID in the AS policy is not specified.	The AS group ID in the AS policy cannot be null.	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 is not specified.	The AS policy ID cannot be null.	Add an AS policy ID.
400	AS.3022	The action of the AS policy request body is invalid.	The action of the AS policy request body is invalid.	Use a valid **action** value.
400	AS.3023	The period type of the AS policy is empty.	The period type of the AS policy is null.	Use a valid **recurrence_type** value.
400	AS.3024	The value of the periodically triggered tasks of the AS policy is empty.	The value of the period type of the AS policy is null.	Add a valid **recurrence_value** value.
400	AS.3025	The period type of the AS policy is invalid.	The value of period type of the AS policy is invalid.	Use a valid **recurrence_type** value.
400	AS.3026	The alarm ID in the AS policy is empty.	The alarm ID in the AS policy is null.	Add an alarm ID.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.3027	The AS group must be in service when the AS policy is performed.	The AS policy must be in the inservice status when the AS policy is performed.	Enable the AS group and try again.
400	AS.3028	The format of the start time for the periodically triggered scaling action is incorrect.	The format of the start time for the scaling action triggered periodically is incorrect.	Use a correct format for the start time.
400	AS.3029	The start time of the periodically triggered scaling action must be earlier than the end time.	The start time of the scaling action triggered periodically 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 rule in the AS policy does not exist.	The alarm in the AS policy does not exist.	Modify the alarm rule used by the AS policy.
400	AS.3031	The AS policy name is invalid.	Invalid AS policy name.	Enter a valid **scaling_policy_name** value.
400	AS.3032	The number of AS policies exceeds the upper limit.	The number of AS policies exceeds the upper limit.	Delete idle AS policies or apply for a higher quota.
400	AS.3033	The triggering time of the periodic policy falls outside the effective time range of the policy.	The triggering time of the periodic policy is not included in the effective time 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	Description	Error Message	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 to which the AS policy applies is invalid.	The percentage of instances which action in the AS policy operates on is invalid.	Use a valid **instance_percentage** value.
400	AS.3036	The action in the AS policy operates is not unique.	The action in the AS policy operates is not unique.	Select one from **instance_percentage** or **instance_number**.
400	AS.3042	The scaling resource in the AS policy does not exist.	The scaling resource in the AS policy does not exist.	Enter a valid AS resource ID in the AS policy.
400	AS.3045	Failed to delete policies in batches.	Failed to delete policies in a batch.	If this error code is returned, use parameter **Message** to obtain the policy ID and the failure cause.
400	AS.3046	Failed to enable policies in batches.	Failed to resume policies in a batch.	If this error code is returned, use parameter **Message** to obtain the policy ID and the failure cause.
400	AS.3047	Failed to disable policies in batches.	Failed to pause policies in a batch.	If this error code is returned, use parameter **Message** to obtain the policy ID and the failure cause.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.3048	The value of the parameter that specifies whether to forcibly delete the policy is invalid.	The value of the parameter that specifies whether to forcibly delete the policy is invalid.	Use a valid **force_delete** value.
400	AS.3049	The list of AS policies on which a batch operation is to be performed is empty.	The list of AS policies to be batched is empty.	Add the IDs of the AS policies to be operated in batches.
400	AS.3050	The format of the alarm ID in the AS policy is incorrect.	The alarm ID in the AS policy is illegal.	Use an alarm ID in correct format.
400	AS.3054	The scaling resource type in the AS policy cannot be left blank.	The scaling resource type in the AS policy is null.	Use a valid **scaling_resource_type** value.
400	AS.3055	The scaling resource ID in the scaling policy is invalid.	The scaling resource ID in the AS policy is format wrong.	Enter a valid AS resource ID in the AS policy.
400	AS.3056	The value of the alarm rule used for deleting the scaling policy is invalid.	The value of the parameter that specifies whether to delete the alarm in the AS policy is invalid.	Use a valid **delete_alarm** value.
400	AS.3057	The **sort_by** value in the request is invalid.	The value of parameter sort_by in the request is invalid.	Use a valid **sort_by** value.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.3058	The **order** value in the request is invalid.	The value of parameter order in the request is invalid.	Use a valid **order** value.
400	AS.4000	The **start_number** value in the instance request is invalid.	The value of parameter start_number in the request for the instance is invalid.	Use a valid **start_number** value.
400	AS.4001	The **limit** value in the instance request is invalid.	The value of parameter limit in the request for the instance is invalid.	Use a valid **limit** value.
400	AS.4003	The **life_cycle_state** value in the instance request is invalid.	The value of parameter life_cycle_state in the instance request is invalid.	Use a valid **life_cycle_state** value.
400	AS.4004	The **health_status** value in the instance request is invalid.	The value of parameter health_status in the request for the instance is invalid.	Use a valid **health_status** value.
400	AS.4005	The **scaling_group_id** in the instance request does not exist.	Parameter scaling_group_id in the request for the instance does not exist.	Use a correct **scaling_group_id**.
400	AS.4006	The instance does not exist.	The instance does not exist.	Use a correct instance ID.

HTTP Status Code	Error Code	Description	Error Message	Solution
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	The **start_number** in the request for the log about the expected number of instances is invalid.	Parameter start_number in the request for the log about the expected number of instances is invalid.	Use a valid **start_number** value.
400	AS.4011	The value of **limit** in the request for the log about the expected number of instances is invalid.	The value of parameter limit in the request for the log about the expected number of instances is invalid.	Use a valid **limit** value.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.4012	The **logId** in the request for the log about the expected number of instances is invalid.	The value of parameter logId in the request for the log about the expected number of instances is invalid.	Use a valid **logId** value.
400	AS.4013	The list of instances to be deleted is empty.	The list of instances to be deleted is null.	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 **inservice** state.	The instance is not in the inservice status.	Select an **inservice** instance.
400	AS.4016	The instance cannot be deleted because it is charged by month or year.	Failed to delete the instance because the instance is charged by month or year.	Refer to the error code description.
400	AS.4017	The requested instance is empty.	The requested instance is null.	Enter a valid instance.
400	AS.4018	The value of the request body action of the batch instance operation is invalid.	The action of the body in the request to operate the instance is invalid.	Use a valid value.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.4019	The list of instances to be added to the AS group is empty.	The list of instances to be added to the AS group is empty.	Enter a valid instance.
400	AS.4020	The AZ to which the instance belongs is different from the AZ to which the AS group belongs.	The AZ to which the instance belongs is not within the AZ in the AS group.	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 already exists.	The added instance has already existed.	Select another valid instance.
400	AS.4024	The added instance is not in the active state.	The instance is not in the active status.	Select an **active** instance.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.4025	Invalid value for determining whether to add new ECSs when ECSs enter the standby mode.	The value of the parameter that specifies whether to append new instance(s) is invalid.	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 instance has already been added to another AS group.	The added instance has already existed in other AS group.	Select another valid instance.
400	AS.4028	The instance ID cannot be left blank.	The AS instance ID cannot be null.	Use a correct instance ID.
400	AS.4029	Failed to batch add instances.	Failed to add instances in a batch.	If this error code is returned, use parameter **Message** to obtain the instance ID and the failure cause.
400	AS.4030	Failed to delete ECSs in batches.	Failed to delete instances in a batch.	If this error code is returned, use parameter **Message** to obtain the instance ID and the failure cause.
400	AS.4032	The list of instances is empty.	The list of instances is null.	Refer to the error code description.
400	AS.4033	Failed to set instance protection in a batch.	Failed to set instance protection in a batch.	If this error code is returned, use parameter **Message** to obtain the instance ID and the failure cause.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.4043	The number of instances for batch operations exceeds the upper limit.	The number of instances exceeds the upper limit.	Ensure that the number of instances for batch operations is no more than 10 at a time.
400	AS.7012	The ELB listener does not exist.	The ELB listener is unavailable.	Modify the ELB listener information.
400	AS.7019	Private IP addresses in the subnet are insufficient.	The number of private IP addresses in the subnet is insufficient.	Modify the subnet information and enable the AS group.
400	AS.7022	The SSH key of the AS configuration does not exist.	The key pair does not exist.	Replace the AS configuration in the AS group.
400	AS.7025	The notification subject is invalid.	The topic urn is not valid.	Use a valid notification subject.
400	AS.7045	The number of tags exceeds the upper limit.	The number of tags exceeded.	Add a maximum of 10 tags.
400	AS.7047	The tag value is too long.	The value of tag in the resource 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	Description	Error Message	Solution
400	AS.7050	The key of tag is duplicate.	The key of tag cannot be 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** value is invalid.	The matches in the resource is invalid.	Use a valid **matches** value.
400	AS.7055	The lifecycle hook metadata contains invalid characters.	The metadata of the lifecycle hook has special character.	Use a valid value.
400	AS.7061	The value of the tag is empty.	The value of scaling tag is null.	Use a valid value.
400	AS.7063	The tag key is too long.	The key of scaling tag is too long.	Use a valid value.
400	AS.7111	The ECS quota is insufficient.	Insufficient instance quota.	Release idle ECSs or apply for a higher ECS quota.
400	AS.7112	The disk capacity quota is insufficient.	Insufficient volume quota.	Release idle ECSs or increase the upper limit of disks.
400	AS.7113	The EIP quota is insufficient.	Insufficient elastic ip quota.	Release idle EIPs or increase the upper limit of EIPs.
400	AS.7114	The ECS memory quota is insufficient.	Insufficient ram quota.	Release idle ECSs or apply for a higher ECS memory quota.
400	AS.7115	The ECS vCPU quota is insufficient.	Insufficient cpu quota.	Release idle ECSs or increase the upper limit of ECS vCPUs.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	AS.9001	The format of the start time of the scaling log is incorrect.	The format of the start time of the scaling activity log is incorrect.	Use a valid value.
400	AS.9002	The format of the end time for the scaling log is incorrect.	The format of the end time for the scaling action log is incorrect.	Use a valid value.
400	AS.9003	The **start_number** in the request for the scaling log is invalid.	The value of parameter start_number in the request for the scaling activity log is invalid.	Use a valid value.
400	AS.9004	The **limit** in the request for the scaling log is invalid.	The value of parameter limit in the request for the scaling activity log is invalid.	Use a valid value.
400	AS.9005	The **logId** in the request for the scaling log is invalid.	The value of parameter log_id in the request for the scaling log is invalid.	Use a valid value.
400	AS.9012	The **type** in the request for the scaling action log is invalid.	The value of parameter type in the request for the scaling activity log is invalid.	Use a valid **type** value.
400	AS.9013	The **status** in the request for the scaling action log is invalid.	The value of parameter status in the request for the scaling activity log is invalid.	Use a valid value.

B Change History

Released On	Description
2020-11-03	This issue is the first official release.

